

CUMULATIVE INDEX 1993

Volume 31

January	IMAGING OF THE PARANASAL SINUSES AND OROMAXILLOFACIAL REGION, pages 1-236
March	IMAGING OF BONE AND SOFT TISSUE TUMORS, pages 237-452
May	THE PEDIATRIC CHEST, pages 453-719
July	NUCLEAR MEDICINE, pages 721-965
September	ENDOCRINE RADIOLOGY, pages 967-1188
November	THE ALIMENTARY TRACT, pages 1189-1430

Note: Page numbers of issue and article titles are in **boldface** type.

- Abdomen, complications of, in solid organ transplantation. See *Solid organ transplantation*.
 plain films of, **1335-1344**
 before barium enema, 1339-1341
 declining use of, 1335-1336
 enduring use of, 1336
 for acute conditions, 1337-1339
 for constipation, 1378-1379
 for diverticulitis, 1341
 tailored uses of, 1342-1343
 to monitor iron supplementation therapy, 1341-1342
 utility of, 1336-1337
 vs. CT, 1343-1344
- Abdominal angina, vs. chronic ischemic bowel disease, 1208-1210
- Abdominal colectomy, postoperative imaging of, 1251
- Abscesses, abdominal, radionuclide imaging of, 784-785
 periapical, and dental implantology, 175, 179
 pulmonary. See *Pulmonary abscesses*.
 with acute pancreatitis, CT and MR imaging of, 1093-1094
- Absolute alcohol, in embolization, in children, 701
- Absorptiometry, of osteoporosis, 1134-1137
- ACE inhibition scintigraphy, of renovascular hypertension. See *Renovascular hypertension*.
- Acetazolamide challenge test, with SPECT, of transient ischemic attacks, 895
- Achalasia, pharyngoesophagography of, 1287
- Acid-peptic disease, imaging of, 1315
- Acquired immunodeficiency syndrome. See *AIDS*.
- Acute leukemia, bone marrow involvement in, MR imaging of, 398-399
- Adamantinomas, of bones, 354-356
- Adenitis, mediastinal infectious, ultrasonography of, in children, 527
- Adenocarcinoma, ductal, CT and MR imaging of, 1101-1105
 algorithm for, 1111
- Adenomas, bronchial, in children, 661-662
 hepatocellular, nuclear medicine studies of, 932
 parathyroid, preoperative localization of, ultrasonography-guided, 980, 983, 986
 pituitary, MR imaging of, 1156-1158
- Adenomyomatosis, of gallbladder, nuclear medicine studies of, 928
- Adrenal cortical scintigraphy, of endocrine hypertension, 1030-1032
- Adrenal gland, ultrasonography of, for endocrine disease, 1069-1076
 congenital adrenal hyperplasia, 1073
 Conn's syndrome, 1071, 1073
 cysts, 1073, 1075
 hemorrhage, 1073
 hypercortisolism, 1071
 neoplasms, 1075
 pheochromocytoma, 1073
- Adrenal medullary scintigraphy, of endocrine hypertension, 1032, 1034-1037
- Adrenal rest tumors, ultrasonography of, 1081-1082
- Adrenal scintigraphy, technique for, 915-918
- Agger cells, preoperative imaging of, for endoscopic sinus surgery, 3, 5
- AIDS, in children, pulmonary infections in, 657
 infections and inflammatory diseases in, radionuclide imaging of, 786-787
 oromaxillofacial features of, **45-60**
 in oral cavity, 49
 in parotid gland, 45-46
 in pharynx and larynx, 49, 56
 in sinonasal cavity, 46-49
 in temporal bone, 56, 60
- Airleak, in newborns, as complication of nursery treatment, 670
- Air-space disease, high-resolution CT of, in children, 536
- Airway disease, high-resolution CT of, in children, 537-538
- Airways, evaluation of, in maxillofacial trauma, 209
 in children, smaller, abnormalities of, 613-615
 vascular complications of, preoperative imaging of, 679-680
 vascular compression of, MR imaging of, 561-562
 preoperative imaging of, 679-680
- Alcoholic cirrhosis, nuclear medicine studies of, 929

- Alimentary tract, imaging of, abdomen. See *Abdomen*.
for colorectal cancer. See *Colorectal cancer*.
for constipation and anorectal disorders. See *Constipation*; *Defecography*.
for ischemic bowel disease. See *Ischemic bowel disease*.
gastrointestinal tract. See *Gastrointestinal tract*.
pharyngoesophagography in. See *Pharyngoesophagography*.
postoperative, 1235-1253
colon, 1246-1247, 1249-1251
esophagus, 1239-1241
for complications, 1251-1252
guidelines for, 1235-1238
larynx and pharynx, 1238
small bowel, 1245-1246
stomach and duodenum, 1241-1245
- Alveolar membrane, nuclear scintigraphy of, in children, 483
- Alzheimer's disease, dementia in, PET of, 939
SPECT of, 895, 897
- Ameloblastomas, of jaws, 112-113
- Ammonia, in PET, of coronary artery disease, 952
- Anencephaly, MR imaging of, 1175
- Anesthesia, for interventional radiology, in children, 693-694
- Aneurysmal bone cysts, 341-344
arising in giant cell bone tumors, 311
MR imaging of, 417
vs. giant cell bone tumors, 307
- Angina, abdominal, vs. chronic ischemic bowel disease, 1208-1210
myocardial perfusion imaging of, 804
- Angiocardiography, radionuclide, in children, 490
- Angiofibromas, of paranasal sinuses and nasal cavity, 81-82
- Angiography, of bones, for giant cell tumors, 301
of endocrine system, vs. venous sampling, 1051-1067
for Conn's syndrome, 1059, 1061-1062, 1065
for Cushing's syndrome, 1053, 1055
for hyperparathyroidism, 1055-1058
for insulinomas and gastrinomas, 1058-1059
for virilizing tumors, 1065
techniques for, 1052-1053
- Angiomatosis, cystic, of bones, 350-351
- Angioplasty, in children, interventional radiology in, 705-706
- Angiosarcomas, of bones, 351-352
- Anisakiasis, and gastritis, 1329
- Ankylosing spondylitis, of temporomandibular joint, 139-140
- Ankylosis, of temporomandibular joint, 143-144
- Anorectal disorders. See *Constipation*; *Defecography*.
- Antibiotics, for cystic fibrosis, in children, 625-626
- Antifibrin monoclonal antibody, radiolabeled, to diagnose deep venous thrombosis, 855-856
- Antral resection, postoperative imaging of, 1242
- Antrectomy, postoperative imaging of, 1242
- Aorta, in children, ascending, MR imaging of, 559, 561
coarctation of, interventional radiology in, 705-706
MR imaging of, 556-559
- Aortic stenosis, in children, interventional radiology in, 703-705
- Apert's syndrome, pre- and postoperative imaging of, 229
- Aplastic anemia, bone marrow involvement in, MR imaging of, 395-397
- Appendicitis, in children, 1404-1405
perforated, 1229-1230
- Arachnoid cysts, MR imaging of, 1166-1167
- Arterial blood gases, in pulmonary embolism, 851
- Arterial flow, nuclear scintigraphy of, in children, 491
- Arterial occlusive disease, and ischemic bowel disease, 1197
- Arterial stimulation and venous sampling, of insulinomas and gastrinomas, 1059
- Arterial switch, for transposition of great arteries, in children, 568
- Arteriography, of soft tissue, for tumors, 368
- Arteriosclerosis, and abdominal angina, 1208-1210
- Arteriovenous malformations, SPECT of, 893
- Arthritis, of temporomandibular joint, 137, 139-141
- Arthrography, of temporomandibular joint, 151-154
- Ascending aorta, MR imaging of, in children, 559, 561
- Aspergillosis, solid organ transplantation and, in children, 471
- Asplenia, telltale signs of, in children, 580
- Asthma, high-resolution CT of, in children, 547
- Atelectasis, solid organ transplantation and, in children, 467
- Atrial septal defect, in children, interventional radiology in, 708
telltale signs of, 576-577
- Avulsive cortical irregularities, of femur, 279-280
- Bacterial infections, and gastritis, 1328
solid organ transplantation and, in children, 469-470
- Bacterial pneumonia, high-resolution CT of, in children, 538-539
- Balloon atrial septostomy, in children, interventional radiology in, 702
- Balloons, in embolization, in children, 701
- Barium enema, in colorectal cancer, 1192-1193, 1293-1313
quality of, 1298, 1301, 1304
radiologic efficacy of, 1304-1305
radiologic evaluation of, 1295, 1297-1298
recurrent, 1259
techniques for, 1294-1295
in constipation, 1379, 1381-1382
plain films before, 1339-1341
- Barium swallow. See *Pharyngoesophagography*.
- Barrett esophagus, pharyngoesophagography of, 1278-1279
- Benign odontogenic tumors, of jaws, 111-119
epithelial, 112-113, 117
ameloblastoma, 112-113
calcifying, 113, 117
mesodermal, 117-119
cementoma, 118-119
fibromyxoma, 117-118
mixed epithelial and mesenchymal, 117
- Bile reflux, nuclear medicine studies of, 929, 931-932
- Biliary atresia, nuclear medicine studies of, 931
- Biliary leakage, liver transplantation and, 1347-1348
nuclear medicine studies of, 929, 931-932
- Biliary obstruction, nuclear medicine studies of, 929, 931-932
- Biomechanical stress lesions, bone scintigraphy of. See *Skeletal trauma*.
- Biopsy, CT-guided, of pancreatic transplantation, to detect rejection, 1354
fine-needle aspiration, in children, interventional radiology in, 699-700
- Blalock-Taussig shunt, for tetralogy of Fallot, in children, 575
- Blastomas, pulmonary, in children, 640, 662-663
- Blindness, endoscopic sinus surgery and, 23-24

- Bone bruises, bone scintigraphy of, 757, 763
 Bone cysts, of jaws, 110-111
 Bone density, measurement of, in osteoporosis. See *Osteoporosis*.
 Bone marrow, metastatic disease in, MR imaging of, 402
 Bone marrow disease, diffuse. See *Diffuse bone marrow disease*.
 Bone marrow transplantation, abdominal complications of, 1348-1350
 Bone pain, intractable, nuclear medicine therapy for, 874
 Bone scintigraphy, of bone tumors. See *Bone tumors*.
 of skeletal trauma. See *Skeletal trauma*.
 technical aspects of, 721-730
 collimation, 723-724
 display and hard copy, 727-728
 distance, 724
 instrumentation, 722-723
 number of counts, 724-725
 radiopharmaceutical agents, 721-722
 scatter reduction, 725-726
 SPECT techniques, 726-727
 Bone tumors, bone scintigraphy of, 731-738
 benign, 731-732
 Ewing's sarcoma, 332, 336
 head and neck tumors, 736
 metastatic, 733-736, 861-864
 from breast carcinoma, 733-734
 from lung carcinoma, 735-736
 from nasopharyngeal carcinoma, 736
 from prostate carcinoma, 734-735
 from renal cell carcinoma, 736
 patterns in, 732-733
 primary, 733, 861
 cartilaginous. See *Cartilaginous bone tumors*.
 endothelial. See *Endothelial bone tumors*.
 giant cell. See *Giant cell bone tumors*.
 pericytic. See *Pericytic bone tumors*.
 vascular, 348
 Bones, adamantinomas of, 354-356
 aneurysmal cysts of. See *Aneurysmal bone cysts*.
 craniofacial, fibro-osseous lesions of. See *Fibro-osseous lesions*.
 fibrous lesions of. See *Fibrous bone lesions*.
 infarctions of, vs. enchondromas, 243-244
 Langerhans cell histiocytosis of, 344-348
 osseous lesions of. See *Osseous lesions*.
 simple cysts of, 339-341
 vs. enchondromas, 243
 temporal, three-dimensional CT of, 189
 Bowel obstruction, plain films of, 1338
 Brain, aging, PET of, 938-939
 Brain tumors, PET of, 871
 Breast carcinoma, metastatic bone disease in, bone scintigraphy of, 733-734
 PET of, 871, 949-950
 Bronchi, abnormalities of, in children, 610-613
 congenital, 610, 612
 extramural, 613
 intraluminal, 612-613
 mural, 613
 Bronchial adenomas, in children, 661-662
 Bronchial atresia, in children, 612
 Bronchial wall disease, high-resolution CT of, in children, 537-538
 Bronchiectasis, in children, 613, 646
 high-resolution CT of, 543
 localized, preoperative imaging of, 686-687
 with HIV infection, lymphocytic interstitial pneumonitis with, 457-458, 460
 Bronchiolitis, in children, 613, 615
 Bronchiolitis obliterans, in children, 615
 high-resolution CT of, 547, 550
 solid organ transplantation and, 473
 Bronchobiliary fistulas, nuclear medicine studies of, 931
 Bronchogenic cysts, in children, 598, 638, 657-658
 ultrasonography of, 527-528
 perinatal and postnatal, 507
 Bronchopulmonary dysplasia, in children, 640
 high-resolution CT of, 543
 in newborns, as complication of nursery treatment, 671-673
 Bronchopulmonary foregut malformations, in children, 595, 598-599
 ultrasonography of, perinatal and postnatal, 506
 Brown tumors, of hyperparathyroidism, vs. giant cell bone tumors, 307
 Bulla ethmoidalis, preoperative imaging of, for endoscopic sinus surgery, 6-7, 9
 Bullous disease, in children, 646
 Bursitis, bone scintigraphy of, 771, 776
 Café-au-lait spots, in polyostotic fibrous dysplasia, 287
 Calculi, with chronic pancreatitis, CT and MR imaging of, 1099
 Cancer, colorectal. See *Colorectal cancer*.
 Candida esophagitis, pharyngoesophagography of, 1279
 Candidiasis, solid organ transplantation and, in children, 471
 Carcinoma, metastatic bone disease in, bone scintigraphy of, breast, 733-734
 head and neck, 736
 lung, 735-736
 nasopharyngeal, 736
 prostate, 734-735
 renal cell, 736
 nuclear medicine studies of, hepatocellular, 932
 of gastric cardia, pharyngoesophagography of, 1289
 ovarian, metastasis of, to gastrointestinal tract, 1360
 PET of, breast, 949-950
 colon, 950
 extremity, 950
 head and neck, 950
 lung, 948-949
 radionuclide imaging of, medullary, 913
 thyroid, 912-913
 recurrent gastrointestinal. See *Gastrointestinal tract*.
 squamous cell, of paranasal sinuses and nasal cavity, 67-70
 Cardiac scintigraphy, in children. See *Nuclear scintigraphy*.
 Cardiology, PET in. See *Positron emission tomography*.
 Cardiomyopathy, PET of, 953-954
 Cardiovascular disease, congenital. See *Congenital cardiovascular disease*.
 Carotid occlusion procedures, evaluation for, SPECT in, 895
 Cartilaginous bone tumors, 237-259
 biology and development of, 237-238
 chondroblastomas, 248-251
 chondromyxoid fibromas, 251-253
 chondrosarcomas, 253-257
 enchondromas, 239-244
 osteochondromas, 244-248
 radiographic diagnosis of, 238-239
 Catecholamine excess syndrome, radionuclide imaging of, 1030
 Cementomas, of jaws, 118-119

- Cephalometric radiography, of maxillofacial deformities, 223-225
- Cerebral neoplasms, PET of, 942
- Cerebrospinal fluid, leakage of, endoscopic sinus surgery and, 27-29
- Cerebrospinal fluid flow studies, of tumors, 868-870
- Cerebrovascular disease, PET of, 945, 947
SPECT of. See *Neurologic disease*.
- Chemical shift imaging, of diffuse bone marrow disease, 391
- Chemotherapy, for Ewing's sarcoma, 332, 336
- Chest pain, myocardial perfusion imaging of, 804
- Chest wall, preoperative imaging of, in children, 680-682
- Chiasmatic gliomas, MR imaging of, 1169
- Child abuse, gastrointestinal tract trauma in, 1405-1407
- Chloral hydrate, for interventional radiology, in children, 693-694
- Cholecystectomy, laparoscopic, nuclear medicine studies of, 931
- Cholecystitis, nuclear medicine studies of, 925-928
plain films of, 1337
- Choledochal cysts, nuclear medicine studies of, 931
- Cholescintigraphy. See *Hepatobiliary system*.
- Cholestasis, nuclear medicine studies of, 928-929
- Chondroblastomas, imaging of, 248-251
vs. enchondromas, 243
vs. giant cell bone tumors, 307
- Chondroectodermal dysplasia, congenital heart disease in, 581-582
- Chondromas, MR imaging of, 417
of paranasal sinuses and nasal cavity, 84-85
- Chondromatosis, synovial, of temporomandibular joint, 160-162
- Chondromyxoid fibromas, imaging of, 251-253
vs. chondroblastomas, 251
vs. enchondromas, 243
vs. giant cell bone tumors, 307, 308
- Chondrosarcomas, imaging of, 253-257
of paranasal sinuses and nasal cavity, 84-85
vs. enchondromas, 244
- Chronic inflammatory sinonasal diseases, 33-44
chronic sinusitis, 37-40
fungal disease, 40-41
granulomatous disease, 41-42
imaging techniques for, 33-37
for differential diagnosis, 44
for normal secretions, 36
for pathologic secretions, 36-37
mucocoeles, 40
retention cysts and polyps, 42-44
- Cirrhosis, alcoholic, nuclear medicine studies of, 929
- Clear cell chondrosarcomas, imaging of, 256-257
- Cleft lip, pre- and postoperative imaging of, 227
- Cleft palate, pre- and postoperative imaging of, 227
- Clefts, osseous maxillary, CT of, 195-207
case reports of, 196-201
- Closed intracranial injuries, SPECT of, 901, 904
- Colic, renal, plain films of, 1338
- Collagen vascular disease, and esophageal dysmotility, pharyngoesophagography of, 1288-1289
in ischemic bowel disease, 1211
- Colon, metastatic disease in, 1370-1372
perforations of, 1229-1233
postoperative imaging of, 1246-1247, 1249-1251
- Colon carcinoma, PET of, 950
- Colon interposition, postoperative imaging of, 1241
- Colonic ischemia, imaging of, 1214-1217
- Colonoscopy, of abdomen, declining use of, 1336
of colorectal cancer, 1192
recurrent, 1259
- Color Doppler ultrasonography, of parathyroid glands, 985
of soft tissue, for tumors, 369
- Colorectal cancer, detection of, 1294
epidemiology of, 1293
pathology of, 1293-1294
recurrent, 1259-1263
screening for, 1189-1195
American College of Radiology and, 1193-1194
barium enema in. See *Barium enema*.
current tests in, 1191-1192
evolving concepts in, 1192-1193
pathogenesis and rationale for, 1190-1191
public policy dilemmas in, 1190
radiologist's role in, 1194
- Computed tomography, during arterial portography, of colon, for recurrent carcinoma, 1261-1262
high-resolution, of pulmonary parenchymal disorders, in children. See *Pulmonary parenchymal disorders*.
of abdomen, vs. plain films, 1343-1344
of acute cerebrovascular ischemia, 888, 890
of bones, for aneurysmal cysts, 343-344
for cartilaginous tumors. See *Cartilaginous bone tumors*.
for Ewing's sarcoma, 332
for fibrous lesions. See *Fibrous bone lesions*.
for giant cell tumors, 300, 301, 302
for Langerhans cell histiocytosis, 346
for osseous lesions. See *Osseous lesions*.
for simple cysts, 341
of bronchi, in children. See *Bronchi*.
of chronic inflammatory sinonasal diseases. See *Chronic inflammatory sinonasal diseases*.
of colon, for recurrent carcinoma, 1259-1262
of craniofacial bones, for fibro-osseous lesions. See *Fibro-osseous lesions*.
of dental implantology, 164, 170-171, 175, 179
of esophagus, for recurrent carcinoma, 1256, 1258-1259
of gastrointestinal tract, for perforations. See *Gastrointestinal tract*.
of head trauma, 901
of hyperparathyroidism, vs. other imaging techniques, 1026-1027
of ischemic bowel disease, 1207
of jaws, for benign odontogenic tumors. See *Benign odontogenic tumors*.
for cysts. See *Cysts*.
of maxillofacial deformities, 225-226
of maxillofacial trauma. See *Maxillofacial trauma*.
of nasal-ethmoid complex, for endoscopic sinus surgery, 9, 11
of occult fractures, 747
of oromaxillofacial region, for features of AIDS. See *AIDS*.
of osseous maxillary clefts, 195-207
case reports of, 196-201
of ovaries. See *Ovaries*.
of pancreas. See *Pancreas*.
of paranasal sinuses and nasal cavity, for epithelial tumors. See *Epithelial tumors*.
for nonepithelial tumors. See *Nonepithelial tumors*.
of radiation vasculitis, 1213-1214
of soft tissue, for tumors, 368
of temporomandibular joint, 150-151
with pneumoarthrography, 151-152
of trachea, in children. See *Trachea*.
quantitative, of osteoporosis, 1137-1139

- three-dimensional. See *Three-dimensional computed tomography*.
- to guide biopsy, of pancreatic transplantation, to detect rejection, 1354
- two- and three-dimensional, of musculoskeletal tumors. See *Musculoskeletal tumors*.
- Computed tomography-cisternography, of cerebrospinal fluid leak, after endoscopic sinus surgery, 27-28
- Concha bullosa, preoperative imaging of, for endoscopic sinus surgery, 11, 13
- Condylar agenesis, of temporomandibular joint, 135-136
- Condylar disease, and maxillofacial deformities, pre- and postoperative imaging of, 228
- Condylar fractures, preoperative imaging of, 210
- Condylar hyperplasia, of temporomandibular joint, 137
- Condylar hypoplasia, of temporomandibular joint, 136-137
- Congenital cardiovascular disease, MR imaging of, 553-572
- 3-D reconstruction of heart and great vessels in, 554, 556
- for ascending aorta, 559, 561
- for coarctation, 556-559
- for cyanotic heart disease, 566, 568-570
- for pulmonary arteries and right ventricular obstructions, 562, 564, 566
- for vascular rings and vascular airway compression, 561-562
- patient selection and screening for, 553
- safety of, 553-554
- scanning options and strategies for, 554
- sedation for, 554
- Congenital cystic disease, pulmonary, in newborns, 673
- Congenital diaphragmatic hernia, in children, 631-633
- ultrasonography of, perinatal and postnatal, 505-506
- in newborns, 673
- Congenital heart disease, interventional radiology in, 701-702
- telltale signs of, 573-582
- abnormal situs, 579-581
- anomalous pulmonary veins, 579
- bilateral pulmonary hyperinflation, 581
- congenital pericardial defect, 579
- decreased pulmonary vascularity, 577-578
- flat or concave main pulmonary artery segment, 574-575
- increased pulmonary vascularity, 575-577
- in cyanotic patient, 577
- right aortic arch, 573-574
- skeletal abnormalities, 581-582
- systemic collateral arteries, 578-579
- Congenital lobar emphysema, in newborns, 673
- Conn's syndrome, angiography of, vs. venous sampling, 1059, 1061-1062, 1065
- bilateral adrenocortical nodularity in, 1039-1043
- radionuclide imaging of, 1029-1030
- NP-59 in, 1032
- ultrasonography of, 1071, 1073
- Connective tissue diseases, and esophageal dysmotility, pharyngoesophagography of, 1288-1289
- Constipation, 1375-1393
- anatomy and physiology of defecation in, 1376-1377
- barium enema in, 1379, 1381-1382
- defecography of. See *Defecography*.
- definition of, 1375-1376
- intestinal transit studies of, 1382-1384
- patient history of, 1377-1378
- physical examination of, 1378
- plain films of abdomen for, 1378-1379
- Coronary artery disease, myocardial perfusion imaging of. See *Myocardial perfusion imaging*.
- PET of, 952-953
- Craniofacial bones, fibro-osseous lesions of. See *Fibro-osseous lesions*.
- Craniofacial fibrous dysplasia, imaging of, 287
- Craniopharyngiomas, MR imaging of, 1164-1165
- Cricopharyngeal dysfunction, pharyngoesophagography of, 1275
- Crohn's disease, and gastrointestinal tract inflammation, 1330
- Croup, in children, 609
- Crouzon's syndrome, pre- and postoperative imaging of, 229
- Cushing's syndrome, angiography of, vs. venous sampling, 1053, 1055
- bilateral adrenocortical nodularity in, 1043-1049
- radionuclide imaging of, 1029
- NP-59 in, 1031-1032
- Cyanosis, increased pulmonary vascularity in, 577
- Cyanotic heart disease, postoperative evaluation of, in children, 566, 568-570
- Cystic adenomatoid malformation of lung, in children, 633-634, 658, 660
- ultrasonography of, perinatal and postnatal, 507, 509
- Cystic angiomatosis, of bones, 350-351
- Cystic fibrosis, in children, 617-631
- clinical features of, 617-622
- in gastrointestinal tract, 617-618
- in respiratory tract, 618-619
- in sweat glands, 618
- diagnosis of, 622, 624
- genetics and prevalence of, 617
- high-resolution CT of, 547
- newborn screening for, 624
- prognosis for, 628
- psychological aspects of, 627
- radiographic progression of, 619, 622
- treatment of, 624-628
- gastrointestinal, 627
- pulmonary, 624-626
- complications of, 626-627
- Cystic lung disease, with lymphocytic interstitial pneumonitis, in children, with HIV infection, 460
- Cystic neoplasms, pancreatic, CT and MR imaging of, 1105
- algorithm for, 1111
- Cysts, aneurysmal bone. See *Aneurysmal bone cysts*.
- choledochal, nuclear medicine studies of, 931
- CT and MR imaging of, ovarian, dermoid, 1125-1126
- nonneoplastic, 1119-1120
- epidermoid bone, vs. enchondromas, 242
- in children, 631-649
- acquired lesions, 640, 643-648
- inflammatory pneumatoceles, 643
- pulmonary abscesses, 643
- pulmonary cysts in systemic disease, 644, 646, 648
- traumatic pneumatoceles, 643
- acquired lesions in perinatal period, 640
- bronchogenic. See *Bronchogenic cysts*.
- congenital lesions after newborn period, 637-640
- neoplasms, 640
- pulmonary parenchymal cysts, 638
- congenital lesions in newborns, 631-637
- cystic adenomatoid malformation, 633-634
- diaphragmatic hernia, 631-633
- lobar overinflation, 635, 637
- lymphangiomas, 638
- pulmonary sequestration, 634-635

Cysts (Continued)

- esophageal duplication, 598
- foregut duplication, 595, 598-599
- hydatid, 644, 646, 652
- mediastinal, preoperative imaging of, 682-683
 - ultrasonography of, 527
- neurenteric, 598-599
- pericardial, 595
- thymic, 591
- MR imaging of, arachnoid, 1166-1167
 - Rathke's cleft, 1166
- of jaws, imaging techniques for, 101-102
 - nonodontogenic, 104, 110-111
 - fissural, 104, 110
 - static bone cavity, 110-111
 - traumatic bone, 110
 - odontogenic, 102-104
 - dentigerous, 103
 - keratocysts, 103-104
 - radicular, 102-103
 - residual, 104
- parathyroid, preoperative localization of, ultrasonography-guided, 987
- simple bone, 339-341
 - vs. enchondromas, 243
- sinonasal, 42-44
 - ultrasonography of, adrenal, 1073, 1075
 - thyroid, 970-971
- Cytomegalovirus, solid organ transplantation and, in children, 470
- Cytomegalovirus esophagitis, pharyngoesophagography of, 1279
- Dedifferentiated chondrosarcomas, imaging of, 256
- Deep venous thrombosis, diagnosis of, 855-856
- Defecation, anatomy and physiology of, 1376-1377
- Defecography, of anorectal disorders, 1384-1389
 - descending perineum syndrome, 1389-1390
 - enteroceles, 1387-1388
 - incontinence, 1386-1387
 - intussusception, 1390
 - protocol for, 1385-1386
 - rectal prolapse, 1390-1391
 - rectoceles, 1387
 - spastic pelvic floor, 1388-1389
- Dementias, PET of, 939
- SPECT of. See *Neurologic disease*.
- Dental implantology, 163-180
 - CT software programs in, 164, 170-171, 175, 179
 - dictated reports in, 171
 - radiographic and surgical stents in, 170-171
 - dental anatomy in, 175
 - history and development of, 164
 - oral pathology in, 175, 179
 - preoperative evaluation for, 171
 - surgical procedure for, 174-175
- Dental radiology, 91-100
 - dental morphology in, 91-93
 - embryology in, 91
 - extraoral, 97-98
 - lateral oblique projections, 97
 - skull projections, 97
 - intraoral, 94-95, 97
 - bite-wing radiographs, 95
 - occlusal radiographs, 95, 97
 - periapical radiographs, 94-95
 - of craniofacial bones, for fibro-osseous lesions. See *Fibro-osseous lesions*.
 - of dental implantology. See *Dental implantology*.
 - of jaws, for benign odontogenic tumors. See *Benign odontogenic tumors*.
 - for cysts. See *Cysts*.
 - of maxillofacial deformities. See *Maxillofacial deformities*.
 - of maxillofacial trauma. See *Maxillofacial trauma*.
 - of osseous maxillary clefts, 195-207
 - case reports of, 196-201
 - of temporomandibular joint. See *Temporomandibular joint*.
 - panoramic, 98, 100
 - tomography in, 100
- Dentigerous cysts, of jaws, 103
- DeQuervain's thyroiditis, radionuclide imaging of, 1001
- Dermoid cysts, ovarian, CT and MR imaging of, 1125-1126
- Dermoid tumors, of hypothalamic-pituitary axis, MR imaging of, 1171-1172
- Descending perineum syndrome, defecography of, 1389-1390
- Desmoplastic fibromas, of bones, 282, 284
- Diabetes insipidus, MR imaging of, 1178-1179
- Diabetes mellitus, gallbladder dysfunction in, nuclear medicine studies of, 928
 - insulin-dependent, pancreatic transplantation for, CT and MR imaging of, 1108-1109
 - algorithm for, 1111
 - ultrasonography of, 1077
- Diaphragm, in children, injury of, postoperative, 689, 691
 - preoperative imaging of, 680-682
 - ultrasonography of, 522-524
- Diastolic function, radionuclide imaging of, 822
- Diethylenetriaminepentaacetic acid, in ACE inhibition scintigraphy, of renovascular hypertension, 833, 839, 841, 843, 844, 845, 846
- Differentiated adamantinomas, of bones, 356
- Diffuse bone marrow disease, MR imaging of, 383-409
 - anatomy and physiology in, 384-389
 - hematopoiesis, 384-385
 - marrow conversion, 385-388
 - marrow reconversion, 388-389
 - bone marrow characteristics in, 390
 - chemical shift imaging in, 391
 - for bone marrow infarction, 405
 - for bone marrow stem cell failure, 395-397
 - aplastic anemia, 395-397
 - for generalized and local disorders, 393-395
 - polycythemia vera, 393, 395
 - uncontrolled stem cell proliferation, 393
 - for malignant bone marrow infiltration and replacement, 398-400
 - acute leukemia, 398-399
 - bone marrow metastases, 402
 - lymphoma, 399-400
 - multiple myeloma, 400-402
 - for stem cell dysplasia, 402-405
 - sickle cell anemia, 402-405
 - gradient echo imaging in, 392
 - imaging strategy in, 392-393
 - ionizing radiation in, 397-398
 - spin echo imaging in, 390-391
 - water and fat suppression techniques in, 391-392
- Dimeraptosuccinic acid, in ACE inhibition scintigraphy, of renovascular hypertension, 833, 839, 844
- in radionuclide imaging, of medullary carcinoma, 913
- Diphosphonates, in bone scintigraphy, 722
- Dislocation, of temporomandibular joint, 141, 143

- Diverticula, pharyngeal, pharyngoesophagography of, 1274-1275
 Zenker, postoperative imaging of, 1239
 Diverticulitis, perforated, 1229-1230
 plain films of, 1341
 postoperative imaging of, 1250
 Doppler ultrasonography, of soft tissue, for tumors, 369
 Drug-induced esophagitis, pharyngoesophagography of, 1280
 Dual x-ray absorptiometry, of osteoporosis, 1135-1137
 Ductal adenocarcinoma, CT and MR imaging of, 1101-1105
 algorithm for, 1111
 Duodenal masses, surgical procedures for, postoperative imaging of, 1245
 Duodenitis, imaging of, 1318-1319, 1326-1329
 Duodenum, imaging of, for inflammatory diseases. See *Gastrointestinal tract*.
 postoperative, 1241-1245
 Dwarfism, pituitary, MR imaging of, 1176
 Dysphagia, etiology of, 1265-1266
 Dysrhythmias, fetal echocardiography of, 513

 Echocardiography, fetal. See *Fetal echocardiography*.
 Ectopic thymus, in children, 586, 588
 Edema, in children, pulmonary, high-resolution CT of, 540
 solid organ transplantation and, 467
 Electrocardiography, of pulmonary embolism, 851
 Emboli, septic, in children, 652
 Embolization, in children, interventional radiology for, 700-701
 Emphysema, congenital lobar, in newborns, 673
 pulmonary interstitial, in children, 640
 in newborns, as complication of nursery treatment, 670
 Empty sella, MR imaging of, 1172-1173
 Empyema, in children, drainage of, interventional radiology in, 697-699
 postoperative, 687
 Enalapril, in ACE inhibition scintigraphy, of renovascular hypertension, 838, 839, 841
 Encephaloceles, transsphenoidal, MR imaging of, 1173-1175
 Encephalopathy, HIV, SPECT of, 897, 899
 Enchondromas, imaging of, 239-244
 MR imaging of, 417
 vs. chondroblastomas, 251
 Endocrine hypertension, radionuclide imaging of, 1029-1038
 adrenal cortical scintigraphy in, 1030-1032
 adrenal medullary scintigraphy in, 1032, 1034-1037
 catecholamine excess syndrome, 1030
 Cohn's syndrome, 1029-1030
 Cushing's syndrome, 1029
 Endocrine radiology, angiography vs. venous sampling in. See *Angiography*.
 of adrenal gland. See *Adrenal gland*.
 of Conn's syndrome. See *Conn's syndrome*.
 of Cushing's syndrome. See *Cushing's syndrome*.
 of endocrine hypertension. See *Endocrine hypertension*.
 of hyperparathyroidism. See *Hyperparathyroidism*.
 of hypothalamic-pituitary axis. See *Hypothalamic-pituitary axis*.
 of osteoporosis. See *Osteoporosis*.
 of ovaries. See *Ovaries*.
 of pancreas. See *Pancreas*.
 of parathyroid glands. See *Parathyroid glands*.
 of scrotum, 1081-1082
 of thyroid gland. See *Thyroid gland*.
 radionuclide imaging in, 909-921
 adrenal scintigraphy, 915-918
 historical aspects of, 909
 medullary carcinoma, 913
 neuropeptide imaging, 918-919
 parathyroid glands, 913-915
 suitable radionuclides in, 909-910
 suitable radiopharmaceuticals in, 910-911
 thyroid carcinoma and metastatic thyroid disease, 912-913
 thyroid imaging, 911-912
 Endometriosis, CT and MR imaging of, 1123-1124
 Endoscopic retrograde cholangiopancreatography, of pancreatic neoplasms, 1104
 Endoscopic sinus surgery, complications of, 13, 18-19, 21-32
 cerebrospinal fluid leak, 27-29
 hemorrhage, 26-27
 intracranial injury, 29
 orbital injury, 22-26
 recurrent inflammatory disease, 21-22
 preoperative imaging for, 1-20
 ethmoid bone, 2-3
 lateral nasal wall, 3, 5
 mucociliary system, 1-2
 ostomeatal complex, 5-7, 9
 Endoscopic ultrasonography, of endocrine pancreatic tumors, 1077-1078
 Endothelial bone tumors, 348-352
 angiosarcomas, 351-352
 cystic angiomas, 350-351
 hemangiomas, 348-350
 Enema, barium. See *Barium enema*.
 Enostosis, imaging of, 261-262
 Enterocoles, defecography of, 1387-1388
 Eosinophilic gastroenteritis, imaging of, 1330, 1332
 Eosinophilic granulomas, vs. chondroblastomas, 251
 Epidermoid cysts, vs. enchondromas, 242
 Epidermoid tumors, of hypothalamic-pituitary axis, MR imaging of, 1171-1172
 Epilepsy, PET of, 939, 942
 SPECT of, 899, 901
 Epiphora, endoscopic sinus surgery and, 23
 Epiphyseal injuries, bone scintigraphy of, 766
 Epithelial tumors, of paranasal sinuses and nasal cavity, 61-73
 glandular tumors, 71
 imaging techniques for, 62-64, 66
 papillomas, 66-67
 squamous cell carcinoma, 67-70
 ovarian, CT and MR imaging of, 1126-1129
 Esophageal duplication, ultrasonography of, in children, 527-528
 Esophageal duplication cysts, in children, 598
 Esophageal dysfunction, postoperative, in children, 687-689
 Esophageal strictures, balloon dilatation of, in children, interventional radiology in, 695, 697
 Esophagitis, pharyngoesophagography of, 1279, 1280
 Esophagography, of pharyngeal and esophageal perforations, 1221
 Esophagus, contrast imaging of. See *Pharyngoesophagography*.
 imaging of, for perforations, 1219-1222
 for recurrent carcinoma, 1255-1259
 postoperative, 1239-1241
 metastatic disease in, 1367-1368

- Estheseoneuroblastomas, of paranasal sinuses and nasal cavity, 82
- Ethmoid bone, preoperative imaging of, for endoscopic sinus surgery, 2-3
- Ethmoidal infundibulum, preoperative imaging of, for endoscopic sinus surgery, 5-6
- Ewing's sarcoma, 325-337
bone scintigraphy of, 733
cell of origin in, 326
pathology and histology of, 325-326
prognosis for, 332, 336
radiographic features of, 328-332
symptoms of, 326, 328
treatment of, 332, 336
radiographic follow-up of, 336
- Extracorporeal membrane oxygenation, for pulmonary disease, in newborns, 674-675
- Extraluminal air, in abdomen, plain films of, 1337
- Extraosseous osteosarcomas, imaging of, 275
- Extremity tumors, PET of, 950
- Facet syndrome, bone scintigraphy of, 766-767
- "Fallen fragment" sign, in plain films, of simple bone cysts, 340
- Fasciitis, plantar, bone scintigraphy of, 764, 766
- Fat suppression techniques, in MR imaging, of diffuse bone marrow disease, 391-392
- Fatty tumors, of soft tissue, MR imaging of, 361
- Fecal incontinence, defecography of, 1386-1387
- Fecal occult blood tests, for colorectal cancer, 1191, 1294
- Feet, giant cell tumors of, 309-310
- Femur, medial supracondylar defects of, 279-280
- Fentanyl citrate, for interventional radiology, in children, 693-694
- Fetal echocardiography, 509-513
cardiac anatomy in, 510, 512
cardiac function in, 512-513
cardiac physiology in, 512
of dysrhythmias, 513
- Fever of unknown origin, radionuclide imaging of, 787-788
- Fibromas, cementifying, of craniofacial bones, 132
of jaws, 118-119
chondromyxoid. *See Chondromyxoid fibromas.*
of bones, 280-282, 284
ossifying, of craniofacial bones, 127
- Fibroxanthomas, of jaws, 117-118
- Fibro-osseous lesions, of craniofacial bones, 121-134
fibrous dysplasia, 122-125
of periodontal ligament origin, 125, 127, 132
cementifying fibromas, 132
florid osseous dysplasia, 127
ossifying fibromas, 127
periapical cemental dysplasia, 127
- Fibrosarcomas, of bones, 292-293
- Fibrous bone lesions, 279-297
benign fibrous histiocytomas, 284-285
desmoplastic fibromas, 282, 284
fibrous dysplasia, 285-291
craniofacial, 287
monostotic, 286
polyostotic, 286-287
secondary tumors in, 288
malignant, 291-296
fibrosarcomas, 292-293
histiocytomas, 293
medial supracondylar defects of femur, 279-280
nonossifying fibromas and fibrous cortical defects, 280-282
- Fibrous defects, primary skeletal, MR imaging of, 417
- Fibroxanthomas, vs. enchondromas, 242-243
- Fine-needle aspiration, CT-guided, of pancreatic neoplasms, 1103-1104
in children, interventional radiology in, 699-700
ultrasonography-guided, of parathyroid disease, 987
of thyroid disease, 979
- Fissural cysts, of jaws, 104, 110
- Fistulas, hepatobiliary, nuclear medicine studies of, 931
tracheoesophageal, in children, 606-607
- Flare phenomenon, in bone scintigraphy, 732-733, 734
- Florid osseous dysplasia, of craniofacial bones, 127
- Fluid collections, liver transplantation and, 1348
- pancreatic transplantation and, 1354-1355
- Fluid-fluid levels, MR imaging of, in primary skeletal neoplasms, 417
in soft tissue tumors, 367
- Fluorodeoxyglucose, in PET. *See Positron emission tomography.*
- Fluoroscopy, of gastrointestinal tract, in children, 1396
- Follicle cysts, of jaws, 103
ovarian, CT and MR imaging of, 1120
- Fontan procedure, for ventricular obstructions, in children, 562, 564, 570
- Foregut duplication cysts, in children, 595, 598-599
- Foreign bodies, in children, aspiration of, bronchial, 612-613
nuclear scintigraphy of, 483, 486
tracheal, 608-609
retrieval of, esophageal, interventional radiology in, 694-695
intravascular, interventional radiology in, 694-695
- Fractures, bone scintigraphy of. *See Skeletal trauma.*
maxillofacial, preoperative imaging of, 209-210, 212, 216-217
of head and neck, three-dimensional CT of, 183
of temporomandibular joint, 143
- Fungal diseases, sinonasal, 40-41
- Fungal infections, and gastritis, 1329
in children, 652
solid organ transplantation and, 471
- Furosemide, in ACE inhibition scintigraphy, of renovascular hypertension, 837-838, 841, 846
- Gadolinium, in MR imaging, of hyperparathyroidism, 1018, 1023-1024
of primary skeletal neoplasms, 413-414, 421-422
of soft tissue tumors, 368
- Gallbladder dysfunction, nuclear medicine studies of, 928
- Gallium, in radionuclide imaging. *See Radionuclide imaging.*
- Ganglion cell tumors, in children, 600, 603
- Ganglioneuroblastoma, in children, 600, 603
- Ganglioneuroma, in children, 600, 603
- Ganglions, of soft tissue, MR imaging of, 365, 367
- Gastric bypass, postoperative imaging of, 1244
- Gastric cardia, carcinoma of, pharyngoesophagography of, 1289
- Gastric masses, surgical procedures for, postoperative imaging of, 1245
- Gastrinomas, angiography of, vs. venous sampling, 1058-1059
- Gastritis, imaging of, 1315-1317, 1326-1329
- Gastroenteritis, eosinophilic, 1330, 1332

- Gastroesophageal reflux, pharyngoesophagography of, 1275, 1277-1278
 postoperative imaging of, 1239-1241
 Gastroesophageal strictures, postoperative imaging of, 1241
 Gastrointestinal tract, complications of, in cystic fibrosis, in children, 617-618, 627
 imaging of, for inflammatory diseases, 1315-1333
 acid-peptic disease, 1315
 duodenal ulcers, 1319, 1321-1326
 duodenitis, 1318-1319
 gastric ulcers, 1317-1318
 gastritis, 1315-1317
 infectious gastritis/duodenitis, 1326-1329
 noninfectious granulomatous disease, 1329-1332
 for metastatic disease, 1359-1373
 direct invasion or extension, 1360-1361
 gastrointestinal tract as target organ, 1359-1360
 hematogenous dissemination, 1362-1363, 1365
 in colon and rectum, 1370-1372
 in esophagus, 1367-1368
 in small bowel, 1369-1370
 in stomach, 1368-1369
 incidence of secondary bowel involvement, 1360
 intraluminal or intramural dissemination, 1365, 1367
 intraoperative seeding, 1361-1362
 lymphatic metastases, 1365
 for perforations, 1219-1234
 in colon and rectum, 1229-1233
 in gastroduodenal tract, 1222-1227
 in pharynx and esophagus, 1219-1222
 in small bowel, 1227-1229
 for recurrent carcinoma, 1255-1264
 colorectal, 1259-1263
 esophageal, 1255-1259
 in children, 1395-1407
 for appendicitis, 1404-1405
 for hypertrophic pyloric stenosis, 1399-1401
 for intussusception, 1401-1404
 for obstructions, 1397-1399
 for trauma due to child abuse, 1405-1407
 indications for, 1395-1396
 Gastrojejunostomy, postoperative imaging of, 1242-1243
 Gastroscopy, and gastroduodenal perforations, 1222-1223
 Gated blood pool imaging, of chest, in children, 490
 Gated myocardial perfusion, nuclear scintigraphy of, in children, 490-491
 Gelfoam, in embolization, in children, 701
 Germ cell tumors, mediastinal, in children, 591, 593
 Germinomas, of hypothalamic-pituitary axis, MR imaging of, 1169, 1171
 Giant cell bone tumors, 299-323
 benign, with lung metastases, 312-314
 differential diagnosis of, 306-309
 imaging modalities for, 300-301
 incidence and epidemiology of, 299-300
 malignant, 314-315
 multicentric, 309-312
 aneurysmal bone cysts arising in, 311
 of hands and feet, 309-310
 of spine and sacrum, 310-311
 with Paget's disease, 311-312
 radiographic appearance of, 301-306
 staging of, 315-316
 treatment of, 316-319
 radiographic follow-up of, 319-320
 vs. chondroblastomas, 251
 Gianturco coils, for small vessel occlusion, in children, 709
 Gianturco vascular occlusion device, for small vessel occlusion, in children, 709
 Gingivitis, and dental implantology, 175
 Glandular tumors, of paranasal sinuses and nasal cavity, 71
 Gliomas, chiasmatic, MR imaging of, 1169
 Globulomaxillary cysts, of jaws, 104
 Glomerular agents, in ACE inhibition scintigraphy, of renovascular hypertension, 837, 839, 841, 843-844
 Glomus tumors, of bones, 352-353
 Glucoheptonate, in ACE inhibition scintigraphy, of renovascular hypertension, 839
 Goiter, multinodular, radionuclide imaging of, 998, 1003-1004
 Goldenhar's syndrome, pre- and postoperative imaging of, 228
 Gonadal dysgenesis, CT and MR imaging of, 1117-1118
 Gradient echo imaging, of diffuse bone marrow disease, 392
 Graft function, in hepatic transplantation, nuclear medicine studies of, 931
 Graft-vs.-host disease, bone marrow transplantation and, 1350
 Grand lamella, preoperative imaging of, for endoscopic sinus surgery, 6-7, 9
 Granulomas, eosinophilic, vs. chondroblastomas, 251
 plasma cell, in children, 661
 Granulomatous diseases, gastrointestinal, noninfectious, 1329-1332
 sinonasal, 41-42
 Graves' disease, radionuclide imaging of, 997-998
 ultrasonography of, 976
 Hall-Pallister syndrome, MR imaging of, 1167, 1169
 Haller cells, preoperative imaging of, for endoscopic sinus surgery, 13
 Hamartomas, in children, mesenchymal cystic, 640
 pulmonary, 661
 of tuber cinereum, MR imaging of, 1167, 1169
 Hand-Schüller-Christian disease, MR imaging of, 1167
 Hands, giant cell tumors of, 309-310
 Hashimoto's thyroiditis, radionuclide imaging of, 998, 1000, 1002
 ultrasonography of, 976
 Head, three-dimensional CT of, for pathologic processes. See *Three-dimensional computed tomography*.
 Head and neck tumors, metastatic bone disease in, bone scintigraphy of, 736
 PET of, 871, 950
 Head trauma, SPECT of, 901, 904
 Heart/lung transplantation, in children, preoperative evaluation for, 467. See also *Solid organ transplantation*.
 rejection of, 472-473
 Heart transplantation, abdominal complications of, 1350-1353
Helicobacter pylori, in gastrointestinal inflammatory diseases, 1326-1328
 Hemangiomas, of bones, 348-350
 of soft tissue, MR imaging of, 362-364
 subglottic, in children, 609
 Hemangiopericytomas, of bones, 353-354
 of paranasal sinuses and nasal cavity, 82
 Hematomas, of soft tissue, MR imaging of, 364-365
 Hematopoiesis, in diffuse bone marrow disease, MR imaging of, 384-385

- Hemifacial atrophy, pre- and postoperative imaging of, 228
- Hemifacial microsomia, of temporomandibular joint, 135-136
- pre- and postoperative imaging of, 227-228
- Hemigastrectomy, postoperative imaging of, 1242
- Hemochromatosis, MR imaging of, 1178
- Hemoptysis, in children, cystic fibrosis and, 627
- interventional radiology for, 701
- Hemorrhage, adrenal, ultrasonography of, 1073
- endoscopic sinus surgery and, 26-27
- intracranial, SPECT of, 893-894
- pulmonary, high-resolution CT of, in children, 540
- with acute pancreatitis, CT and MR imaging of, 1093
- Hepatic artery pump studies, of tumors, 870
- Hepatic failure, hypothalamic-pituitary disorders and, MR imaging of, 1179
- Hepatic hemangiomas, nuclear medicine studies of, 868
- Hepatic transplantation, abdominal complications of, 1347-1348
- graft function in, nuclear medicine studies of, 931
- Hepatitis, neonatal, nuclear medicine studies of, 928
- Hepatobiliary system, nuclear medicine studies of, 923-933
- analysis of, 924-925
- for biliary obstruction, leakage, and bile reflux, 929, 931-932
- for cholecystitis, 925-928
- for gallbladder and sphincter of Oddi dysfunction, 928
- for hepatocellular carcinoma and adenoma, 932
- for hyperbilirubinemia and cholestasis, 928-929
- radiopharmaceuticals in, 923-924
- techniques for, 924-925
- pathophysiology of, 923-924
- Hepatocellular adenomas, nuclear medicine studies of, 932
- Hepatocellular carcinoma, nuclear medicine studies of, 932
- Hereditary multiple osteochondromatosis, imaging of, 245
- Hernia, congenital diaphragmatic. *See* *Congenital diaphragmatic hernia*.
- Herpes esophagitis, pharyngoesophagography of, 1279
- Hiatal hernia, postoperative imaging of, 1239-1241
- Hiatus semilunaris, preoperative imaging of, for endoscopic sinus surgery, 6
- High-grade surface osteosarcomas, imaging of, 272-273
- High-frequency ventilation, for pulmonary disease, in newborns, 675-676
- High-resolution computed tomography, of pulmonary parenchymal disorders, in children. *See* *Pulmonary parenchymal disorders*.
- Hirschsprung disease, and constipation, 1381
- Histiocytomas, benign fibrous, 284-285
- malignant fibrous, 293
- Histiocytosis, MR imaging of, 1167
- Histiocytosis X, imaging of, 344-348
- in children, high-resolution CT of, 543
- pulmonary cysts in, 646
- HIV encephalopathy, SPECT of, 897, 899
- HIV esophagitis, pharyngoesophagography of, 1279
- HIV infection, in children, lung involvement in, 453-463
- lymphocytic interstitial pneumonitis, 455-457
- bronchiectasis with, 457-458, 460
- cystic lung disease with, 460
- mycobacterial infections, 460
- Pneumocystis carinii* pneumonia, 454-455, 460
- smooth muscle tumors, 461-462
- varicella, 460-461
- Hodgkin's disease, nuclear medicine studies of, 866-867
- of paranasal sinuses and nasal cavity, 83-84
- Horseshoe lung, in children, 612
- Human immunodeficiency virus infection. *See* *HIV infection*.
- Human polyclonal IgG, in radionuclide imaging, of infections and inflammatory diseases, 791
- Human serum albumin, in radionuclide imaging, of ventricular function, 819
- Huntington's disease, dementia in, PET of, 939
- Hyaline membrane disease, in newborns, 667-668
- Hydatid cysts, in children, 644, 646, 652
- Hydrops fetalis, ultrasonography of, perinatal and postnatal, 501-502
- Hydroxyephedrine, in PET, 954
- Hyperaldosteronism. *See* *Conn's syndrome*.
- Hyperbilirubinemia, nuclear medicine studies of, 928-929
- Hypercortisolism, ultrasonography of, 1071
- Hyperglucocorticoidism. *See* *Cushing's syndrome*.
- Hyperimmunoglobulin E syndrome, pulmonary cysts in, in children, 644
- Hyperparathyroidism, angiography of, vs. venous sampling, 1055-1058
- brown tumors of, vs. giant cell bone tumors, 307
- MR imaging of, 1017-1028
- anatomy in, 1018-1019
- contrast media in, 1018, 1023-1024
- for preoperative localization, 1019
- imaging characteristics in, 1019, 1021-1023
- pitfalls in, 1023
- results of, 1024, 1026
- techniques for, 1017-1019
- vs. other imaging techniques, 1026-1027
- preoperative localization of, ultrasonography-guided, 987
- radionuclide imaging of, 1009, 1012-1014
- ultrasonography of, 980, 983, 985
- Hyperplasia, congenital adrenal, ultrasonography of, 1073
- thyroid, 977
- Hypersensitivity pneumonia, high-resolution CT of, in children, 543
- Hypertension, endocrine. *See* *Endocrine hypertension*.
- renovascular. *See* *Renovascular hypertension*.
- Hyperthyroidism, radionuclide imaging of, 997-998
- ultrasonography of, 976
- Hypertrophic pyloric stenosis, in children, 1399-1401
- Hypogenetic lung syndrome, in children, 610, 612
- Hypoparathyroidism, preoperative localization of, ultrasonography-guided, 986
- Hypophysitis, lymphocytic and autoimmune, MR imaging of, 1178
- Hypothalamic-pituitary axis, MR imaging of, 1147-1183
- anatomy and physiology in, 1147-1154
- CRH-ACTH-cortisol axis, 1151
- embryology, 1150
- GRH-GH axis, 1152
- hypothalamic-pituitary-gonadal axis, 1151-1152
- posterior region, 1149-1150
- preoptic region, 1148
- prolactin axis, 1152
- supraoptic region, 1148-1149
- TRH-TSH-thyroid hormone axis, 1151
- tuberal region, 1149
- vasopressin-oxytocin, 1152-1153
- for congenital anomalies, 1172-1176
- anencephaly, 1175
- empty sella, 1172-1173
- pituitary agenesis and hypoplasia, 1175-1176

- pituitary dwarfism, 1176
 septo-optic dysplasia, 1175
 transsphenoidal encephaloceles, 1173-1175
 for diabetes insipidus, 1178-1179
 for hemochromatosis, 1178
 for hepatic failure, 1180
 for infections and inflammations, 1176-1178
 lymphocytic and autoimmune hypophysitis, 1178
 sarcoidosis, 1177-1178
 for traumatic stalk transection, 1179-1180
 for tumors and tumorlike conditions, 1156-1158,
 1163-1167, 1169, 1171-1172
 arachnoid cysts, 1166-1167
 chiasmatic gliomas, 1169
 craniopharyngiomas, 1164-1165
 dermoid and epidermoid tumors, 1171-1172
 germinomas and teratomas, 1169, 1171
 hamartomas of tuber cinereum, 1167, 1169
 histiocytosis, 1167
 meningiomas, 1163-1164
 metastases, 1163
 pituitary adenomas, 1156-1158
 Rathke's cleft cysts, 1166
 techniques for, 1154-1156
 Hypothyroidism, radionuclide imaging of, 998, 1000
 ultrasonography of, 977
- Immunocompromised children, pulmonary infections in,
 657
 high-resolution CT of, 539
 Immunoscintigraphy, of colon, for recurrent carcinoma,
 1263
 Immunosuppression, heart transplantation and, 1351-
 1352
 kidney transplantation and, 1345-1346
 Impedance plethysmography, of deep venous
 thrombosis, 855
 of pulmonary embolism, 852
 Implantology, dental. *See* *Dental implantology*.
 Incisive canal cysts, of jaws, 104
 Incontinence, fecal, defecography of, 1386-1387
 Indium, in radionuclide imaging. *See* *Radionuclide
 imaging*.
 Infarctions, bone, vs. enchondromas, 243-244
 bone marrow, MR imaging of, 405
 Infections, and inflammatory diseases, radionuclide
 imaging of, 783-794
 abdominal abscesses, 784-785
 age of infection in, 784
 AIDS, 786-787
 fever of unknown origin, 787-788
 inflammatory bowel disease, 785-786
 new agents in, 791-792
 osteomyelitis, 789-791
 pulmonary lesions, 788
 techniques for, 783-784
 vascular graft infections, 788-789
 heart transplantation and, 1352-1353
 in children, fungal, 652
 pulmonary, 652, 657
 in cystic fibrosis, 618-619
 treatment of, 625
 nuclear scintigraphy of, 486-487
 solid organ transplantation and. *See* *Solid organ
 transplantation*.
 viral, 657
 high-resolution CT of, 539
 in immunocompromised children, mycobacterial, 460
 pulmonary, high-resolution CT of, 539
 of hypothalamic-pituitary axis, MR imaging of, 1176-
 1177
 Infectious arthritis, of temporomandibular joint, 141
 Infectious esophagitis, pharyngoesophagography of,
 1279
 Infectious gastritis/duodenitis, imaging of, 1326-1329
 Infiltrative ophthalmopathy, in Graves' disease,
 radionuclide imaging of, 998
 Inflammatory bowel disease, radionuclide imaging of,
 785-786
 Inflammatory diseases, of gastrointestinal tract. *See*
 Gastrointestinal tract.
 radionuclide imaging of. *See* *Infections*.
 Inflammatory pneumatocoles, in children, 640, 643
 Insulinomas, angiography of, vs. venous sampling,
 1058-1059
 ultrasonography of, 1077
 Interstitial disease, high-resolution CT of, in children,
 537
 Interventional radiology, of chest, in children, 693-712
 nonvascular, 693-699
 balloon dilatation in, 695, 697
 for drainage of empyema and abscesses, 697-699
 for fine-needle aspiration and biopsy, 699-700
 for foreign body retrieval, 694-695
 sedation and anesthesia for, 693-694
 vascular, 699-709
 for angioplasty and vascular stents, 705-706
 for aortic stenosis, 703-705
 for atrial septal defect, 708
 for balloon atrial septostomy, 702
 for congenital heart disease, 701-702
 for embolization, 699-701
 for foreign body retrieval, 709
 for mitral stenosis, 705
 for patent ductus arteriosus, 707-708
 for pulmonary artery stenosis, 706-707
 for small vessel occlusion, 709
 for tricuspid stenosis, 705
 for valvuloplasty, 702-703
 Intestinal transit studies, of constipation, 1382-1384
 Intracardiac shunts, radionuclide imaging of, 822-823
 Intracranial hemorrhage, SPECT of, 893-894
 Intracranial injuries, closed, SPECT of, 901, 904
 endoscopic sinus surgery and, 29
 Intraosseous osteosarcomas, imaging of, 266-269, 271
 Intraparenchymal hemorrhage, SPECT of, 893
 Intussusception, defecography of, 1390
 in children, 1401-1404
 Iodine, in nuclear medicine therapy, for thyroid
 carcinoma, 874-875
 in radionuclide imaging, of parathyroid glands, 914-
 915, 993
 of thyroid carcinoma and metastatic thyroid disease,
 912-913
 of thyroid gland, 911-912, 993
 Iodoamphetamine, in SPECT, of neurologic disease, 882-
 883
 Ionizing radiation, and bone marrow failure, MR
 imaging of, 397-398
 Iron supplementation therapy, monitoring of, plain films
 in, 1341-1342
 Ischemic bowel disease, 1197-1218
 chronic, vs. abdominal angina, 1208-1210
 chronic mesenteric, radiographic findings in, 1210-
 1211
 clinical patterns of, 1198-1199
 colonic, 1214-1217
 diagnosis of, 1204-1208

- Ischemic bowel disease (*Continued*)
 etiology of, 1197-1198
 pathophysiology of, 1199-1204
 vasculitis in, 1211-1214
- Ischemic heart disease, ventricular function in,
 radionuclide imaging of, 823-824
- Islet cell tumors, CT and MR imaging of, 1105, 1108
 algorithm for, 1111
- Isomerism syndromes, telltale signs of, in children, 579-581
- Jaundice, neonatal, nuclear medicine studies of, 928
- Jaws, imaging of, for benign odontogenic tumors. See *Benign odontogenic tumors*.
 for cysts. See *Cysts*.
- Job syndrome, pulmonary cysts in, in children, 644
- Juxtacortical osteosarcomas, imaging of, 273-275
- Juxtadiaphragmatic lesions, ultrasonography of, in children, 522-524
- Kaposi's sarcoma, metastasis of, to gastrointestinal tract, 1360
- Keratocysts, of jaws, 103-104
- Kidney transplantation, abdominal complications of, 1345-1347
- Killian-Jamieson diverticula, pharyngoesophagography of, 1275
- Krypton, in nuclear scintigraphy, in children, 482
- Lamina papyracea, violation of, endoscopic sinus surgery and, 22-23
- Langerhans' cell granulomatosis, in children, high-resolution CT of, 543
 pulmonary cysts in, 646
- Langerhans' cell histiocytosis, imaging of, 344-348
- Laparoscopic cholecystectomy, nuclear medicine studies of, 931
- Laryngotracheal papillomatosis, in children, 609, 661
- Laryngotracheoesophageal clefts, in children, 607
- Larynx. See also *Trachea*.
 features of AIDS in, 49, 56
 postoperative imaging of, 1238
- Left-to-right shunt quantification, nuclear scintigraphy of, in children, 491
- Legg-Perthes disease, bone scintigraphy of, 771
- Letterer-Siwe disease, imaging of, 344-345
- Leydig cell tumors, ultrasonography of, 1081-1082
- Lipomas, of soft tissue, MR imaging of, 361
- Liposarcomas, of soft tissue, MR imaging of, 361-362
- Liver disease, in cystic fibrosis, in children, 618
- Liver transplantation, abdominal complications of, 1347-1348
 in children, preoperative evaluation for, 465, 467. See also *Solid organ transplantation*.
- Lobar overinflation, congenital, 635, 637
- Low grade osteosarcomas, imaging of, 271
- Lung carcinoma, metastatic bone disease in, bone scintigraphy of, 735-736
 PET of, 871, 948-949
- Lung transplantation, in children, for cystic fibrosis, 626
 preoperative evaluation for, 467. See also *Solid organ transplantation*.
- Lungs, cystic adenomatoid malformation of, in children, 633-634, 658, 660
 ultrasonography of, perinatal and postnatal, 507, 509
 metastatic disease in, from giant cell bone tumors, 312-314
- Lymph nodes, metastatic disease in, 1365
- Lymphadenopathy, ultrasonography of, in children, 525
- Lymphangiomas, in children, 593, 595, 637
- Lymphangitic metastatic disease, high-resolution CT of, in children, 543
- Lymphatic scintigraphy, in children, 491-493
- Lymphocytic interstitial pneumonitis, in children, with AIDS, 657
 with HIV infection. See *HIV infection*.
- Lymphomas, bone marrow involvement in, MR imaging of, 399-400
 in children, 591
 nuclear medicine studies of, 866-867
 of paranasal sinuses and nasal cavity, 83-84
- Maffucci's syndrome, cartilaginous bone tumors in, 241
- Magnetic resonance imaging, of bones, for aneurysmal cysts, 344
 for bruises, 757
 for cartilaginous tumors. See *Cartilaginous bone tumors*.
 for Ewing's sarcoma, 332, 336
 for fibrous lesions. See *Fibrous bone lesions*.
 for giant cell tumors, 300, 301, 302
 for hemangiomas, 349
 for Langerhans cell histiocytosis, 346
 for osseous lesions. See *Osseous lesions*.
 for osteochondromas. See *Cartilaginous bone tumors*.
 for primary skeletal neoplasms. See *Primary skeletal neoplasms*.
 for simple cysts, 341
 of bursitis, 776
 of chronic inflammatory sinonasal diseases. See *Chronic inflammatory sinonasal diseases*.
 of colon, for recurrent carcinoma, 1262-1263
 of congenital cardiovascular disease. See *Congenital cardiovascular disease*.
 of craniofacial bones, for fibro-osseous lesions. See *Fibro-osseous lesions*.
 of Cushing's syndrome, 1053
 of diffuse bone marrow disease. See *Diffuse bone marrow disease*.
 of epiphyseal injuries, 766
 of head trauma, 901
 of hepatic hemangiomas, 868
 of hyperparathyroidism. See *Hyperparathyroidism*.
 of hypothalamic-pituitary axis. See *Hypothalamic-pituitary axis*.
 of ischemic bowel disease, 1207
 of jaws, for benign odontogenic tumors. See *Benign odontogenic tumors*.
 for cysts. See *Cysts*.
 of occult fractures, 747
 of oromaxillofacial region, for features of AIDS. See *AIDS*.
 of osteomyelitis, 790-791
 of osteonecrosis, 771
 of ovaries. See *Ovaries*.
 of pancreas. See *Pancreas*.
 of paranasal sinuses and nasal cavity, for epithelial tumors. See *Epithelial tumors*.
 for nonepithelial tumors. See *Nonepithelial tumors*.
 of soft tissue, for tumors. See *Soft tissue tumors*.
 of temporomandibular joint, 152-154

- for internal derangement, 154-155, 159
- of tendinitis, 766
- Malignancies, pancreatic, endocrine, ultrasonography of, 1077-1079, 1081
- thyroid, radionuclide imaging of, 1005-1009
- ultrasonography of, 971, 975
- Malignant melanoma, of paranasal sinuses and nasal cavity, 84
- Mandible, fractures of, preoperative imaging of, 209-210, 212
- Mandibulofacial dysostosis, of temporomandibular joint, 135-136
- Marfan syndrome, in children, MR imaging of, 559
- pulmonary cysts in, 646
- Maxillofacial deformities, pre- and postoperative imaging of, 221-231
- cephalometric radiography in, 223-225
- for anteroposterior maxillary hypoplasia/mandibular prognathism, 227
- for Apert's syndrome, 229
- for cleft lip and palate, 227
- for condylar disease, 228
- for Crouzon's syndrome, 229
- for Goldenhar's syndrome, 228
- for hemifacial microsomia, 227-228
- for Rhombert's syndrome, 228
- for Treacher Collins syndrome, 227
- for vertical maxillary hyperplasia/anteroposterior mandibular hypoplasia, 226
- panorgraphic radiography in, 221-223
- tomography in, 225-226
- Maxillofacial trauma, 209-220
- preoperative imaging of, 209-217
- airway in, 209
- for mandibular fractures, 209-210, 212
- for midfacial fractures, 212, 216
- for orbital and zygomatic fractures, 217
- Medial supracondylar defects, of femur, 279-280
- Mediastinal masses, in children, 583-604
- anterior, 583-593
- germ cell tumors, 591, 593
- lymphoma, 591
- thymus. *See* *Thymus*.
- middle, 593, 595-599
- foregut duplication cysts, 595, 598-599
- lymphangiomas, 593, 595
- pericardial cysts, 595
- posterior, 599-603
- ganglion cell tumors, 600, 603
- preoperative imaging of, 682-683
- Mediastinum, ultrasonography of, in children, 524-528
- Medullary carcinoma, radionuclide imaging of, 913
- Melanoma, metastasis of, to gastrointestinal tract, 1360
- Meningiomas, pituitary, MR imaging of, 1163-1164
- Menopause, bone densitometry in, 1141
- Mertiatide, in ACE inhibition scintigraphy, of renovascular hypertension, 841, 846
- Mesenchymal cystic hamartomas, in children, 640
- Mesenteric venous occlusion, and ischemic bowel disease, 1197
- Metabolic arthritis, of temporomandibular joint, 141
- Metabolic diseases, bone densitometry in, 1141
- Meta-iodobenzylguanidine, in adrenal medullary scintigraphy, of endocrine hypertension, 1034-1035, 1037
- in adrenal scintigraphy, 915-916, 918
- in nuclear medicine studies, of tumors, 868
- Metastases, to gastrointestinal tract. *See* *Gastrointestinal tract*.
- to pituitary gland, MR imaging of, 1163
- Metastatic tumors, of paranasal sinuses and nasal cavity, 89-90
- Microsomia, hemifacial, of temporomandibular joint, 135-136
- pre- and postoperative imaging of, 227-228
- Misonidazol, in PET, 954
- Mitral stenosis, in children, interventional radiology in, 705
- Monoclonal antibodies, in nuclear medicine studies, of colon, for recurrent carcinoma, 1263
- of tumors, 872-874
- Monoclonal antigranulocyte antibody, in radionuclide imaging, of infections and inflammatory diseases, 791-792
- Monostotic fibrous dysplasia, imaging of, 286
- Motility, disorders of, esophageal, pharyngoesophagography of, 1285-1286, 1288-1289
- postoperative imaging of, 1239
- Mucocele, imaging of, 40
- Mucociliary system, preoperative imaging of, for endoscopic sinus surgery, 1-2
- Multicentric osteosarcomas, imaging of, 276
- Multinodular goiter, radionuclide imaging of, 998, 1003-1004
- Multiple myeloma, bone marrow involvement in, MR imaging of, 400-402
- bone scintigraphy of, 733
- Musculoaponeurotic fibromatosis, of soft tissue, MR imaging of, 364
- Musculoskeletal tumors, histologic features of, 373-381
- two- and three-dimensional CT of, 425-447
- in radiation oncology, 446
- initial characterization in, 427-437
- rationale for, 426, 446
- soft tissue imaging in, 437, 444-446
- technique for, 425-426
- Mycobacterial infections, in children, with HIV infection, 460
- Mycoplasma pneumonia, high-resolution CT of, in children, 539-540
- Myelography, of abdomen, declining use of, 1336
- Myocardial infarction, myocardial perfusion imaging of, 803-804
- Myocardial perfusion imaging, in children, 488-489
- technetium radiopharmaceuticals in, 795-815
- new agents in, 810
- Tc sestamibi, 795-808, 825
- dual isotope imaging, 807-808
- in acute coronary artery disease, 803-804
- in chronic coronary artery disease, 796, 799-803
- clinical trials of, 799-800
- quantitative analysis of, 801-803
- SPECT vs. planar imaging, 800-801
- vs. thallium, 796
- to assess myocardial viability, 806-807
- with simultaneous function assessment, 804-806, 825-829
- Tc teboroxime, 808-809
- Myocardial viability, myocardial perfusion imaging of, 806-807
- PET of, 953
- Myxedema ileus, and constipation, 1379
- Nasal cavity, imaging of, for epithelial tumors. *See* *Epithelial tumors*.
- for nonepithelial tumors. *See* *Nonepithelial tumors*.

- Nasal wall, lateral, preoperative imaging of, for endoscopic sinus surgery, 3, 5
- Nasogastric tubes, and gastroduodenal perforations, 1223
- Nasolabial cysts, of jaws, 104, 110
- Nasopalatine duct cysts, of jaws, 104
- Nasopharyngeal carcinoma, metastatic bone disease in, bone scintigraphy of, 736
- Neck, three-dimensional CT of, for pathologic processes. See *Three-dimensional computed tomography*.
- Neoplasms, adrenal, ultrasonography of, 1075
- cerebral, PET of, 942
- heart transplantation and, 1353
- in children, pulmonary, 661-663
- solid organ transplantation and, 473, 475, 477
- kidney transplantation and, 1346-1347
- liver transplantation and, 1348
- metastasis of, to gastrointestinal tract. See *Gastrointestinal tract*.
- of colon, postoperative imaging of, 1247, 1249-1250
- of temporomandibular joint, 144
- pancreatic, CT and MR imaging of. See *Pancreas*.
- primary skeletal. See *Primary skeletal neoplasms*.
- Neurenteric cysts, in children, 598-599
- Neuroblastomas, in children, 600
- olfactory, of paranasal sinuses and nasal cavity, 82
- Neurologic disease, SPECT of, 881-907
- cerebrovascular disease, 886-888, 890, 893-895
- acute ischemia, 888, 890
- stroke etiologies, 890, 893-894
- transient ischemic attacks, 894-895
- dementias, 895, 897, 899
- HIV encephalopathy, 897, 899
- of Alzheimer type, 895, 897
- epilepsy, 899, 901
- head trauma, 901, 904
- interpretation of, 885
- normal studies in, 885-886
- technique for, 881-885
- instrumentation, 881-882
- radiopharmaceuticals, 882-884
- Neuropeptide imaging, of endocrine system, 918-919
- Neutropenia, bone marrow transplantation and, 1349-1350
- Newborn chest, 667-676
- pneumonia in, 668, 670
- pulmonary disease in, treatment of, 673-676
- complications of, 670-673
- extracorporeal membrane oxygenation in, 674-675
- high-frequency ventilation in, 675-676
- respiratory distress syndrome in, 667-668
- surfactant therapy for, 668
- surgical emergencies in, 673
- Nissen fundoplication, postoperative imaging of, 1240
- Nonepithelial tumors, of paranasal sinuses and nasal cavity, 75-90
- angiofibroma, 81-82
- chondroma and chondrosarcoma, 84-85
- clinical investigation of, 75-81
- materials and methods for, 75, 77
- results of, 77
- hemangiopericytoma, 82
- lymphoma, 83-84
- malignant melanoma, 84
- metastatic tumors, 89-90
- olfactory neuroblastoma, 82
- osteosarcoma, 85, 89
- plasmacytoma, 84
- rhabdomyosarcoma, 82-83
- schwannoma, 81
- Non-Hodgkin's lymphomas, nuclear medicine studies of, 866-867
- of paranasal sinuses and nasal cavity, 83-84
- Nonossifying fibromas, imaging of, 280-282
- NP-59, in adrenal cortical scintigraphy, of endocrine hypertension, 1030-1032
- in adrenal scintigraphy, 915-916
- Nuclear medicine studies. See also specific procedures, e.g., *Bone scintigraphy*.
- of genitourinary symptoms, in transplantation evaluation, 464, 468
- of hepatobiliary system. See *Hepatobiliary system*.
- of tumors. See *Tumors*.
- Nuclear scintigraphy, of chest, in children, 481-498
- cardiac scintigraphy, 487-492
- for left-to-right shunt quantification, 491
- for myocardial perfusion, 488-489
- for ventricular function, 489-491
- pulmonary scintigraphy, 481-487
- alveolar membrane, 483
- for foreign body aspiration, 483, 486
- for inflammation/infection, 486-487
- for malignancy, 486
- perfusion scintigraphy, 481-482
- ventilation scintigraphy, 482-483
- skeletal scintigraphy, 493-495
- vascular and lymphatic scintigraphy, 492-493
- of neuroblastoma, in children, 600
- Nutcracker esophagus, pharyngoesophagography of, 1287
- Obesity, surgical procedures for, postoperative imaging of, 1244
- Obliterative bronchiolitis, high-resolution CT of, in children, 550
- Ocetreotide, in neuropeptide imaging, of endocrine system, 918-919
- in nuclear medicine studies, of tumors, 870
- Odontomas, of jaws, 117
- Ogilvie syndrome, colonic ischemia in, 1215
- Olfactory neuroblastomas, of paranasal sinuses and nasal cavity, 82
- Ollier's disease, cartilaginous bone tumors in, 241
- Oncology, PET in, 947-948
- Onodi cells, position of, and risk of orbital injury, from endoscopic sinus surgery, 24-25
- preoperative imaging of, for endoscopic sinus surgery, 13
- Opaque chest, ultrasonography of, in children, 524
- Ophthalmopathy, infiltrative, in Graves' disease, radionuclide imaging of, 998
- Oral cavity, features of AIDS in, 49
- Orbits, fractures of, preoperative imaging of, 217
- injuries of, endoscopic sinus surgery and, 22-26
- Oromaxillofacial region, imaging of, for features of AIDS. See *AIDS*.
- Os trigonum syndrome, bone scintigraphy of, 767
- Osseous lesions, 261-278
- benign, 261-265
- enostosis, 261-262
- osteoblastomas, 263-265
- osteoid osteomas, 262-263
- osteomas, 262
- malignant, 265-276
- osteosarcomas, 265-266
- intraosseous osteosarcomas, 266-269, 271
- surface osteosarcomas, 271-276
- Osseous maxillary clefts, CT of, 195-207

- case reports of, 196-201
- Osteoarthritis, bone scintigraphy of, 771
- of temporomandibular joint, 139
- Osteoarthritis, of temporomandibular joint, 139
- Osteoblastomas, imaging of, 263-265
- Osteochondromas, imaging of, 244-248
- MR imaging of, 417
- Osteofibrous dysplasia, vs. adamantinomas, 356
- Osteogenic sarcomas, bone scintigraphy of, 733
- Osteoid osteomas, bone scintigraphy of, 731-732
- imaging of, 262-263
- MR imaging of, 417, 419
- vs. osteoblastomas, 264
- Osteomyelitis, radionuclide imaging of, 789-791
- Osteonecrosis, bone scintigraphy of, 771
- Osteoporosis, radiologic diagnosis of, 1133-1145
- bone density measurements in, interpretation of, 1141-1142
- clinical applications of, 1141
- dual x-ray absorptiometry in, 1135-1137
- plain films in, 1134
- quantitative CT in, 1137-1139
- quantitative ultrasonography in, 1139-1140
- single-photon absorptiometry in, 1134-1135
- Osteosarcomas, imaging of. *See Osseous lesions.*
- of paranasal sinuses and nasal cavity, 85, 89
- vs. giant cell bone tumors, 306
- Ostiomeatal complex, preoperative imaging of, for endoscopic sinus surgery, 5-7, 9
- Otomandibular dysostosis, of temporomandibular joint, 135-136
- Ovarian carcinoma, metastasis of, to gastrointestinal tract, 1360
- Ovaries, CT and MR imaging of, 1115-1132
- for endometriosis, 1123-1124
- for female pseudohermaphroditism, 1118
- for male pseudohermaphroditism, 1118-1119
- for mixed gonadal dysgenesis, 1117-1118
- for nonneoplastic cysts, 1119-1120
- for polycystic ovarian syndrome, 1121-1122
- for stromal hyperthecosis, 1122-1123
- for testosterone-producing tumors, 1123
- for tumors, 1124-1129
- benign epithelial and stromal tumors, 1126-1127
- benign teratomas, 1125-1126
- for staging, 1129-1130
- malignant epithelial tumors, 1127-1129
- normal anatomy in, 1116-1117
- techniques for, 1115-1116
- Paget's disease, and secondary osteosarcomas, 275
- giant cell bone tumors with, 311-312
- Pancreas, CT and MR imaging of, 1085-1113
- algorithms for, 1110-1111
- for acute pancreatitis, 1089-1097
- mild, 1089-1092
- necrotic, 1092
- results of, 1094-1097
- severe, 1092
- with abscesses, 1093-1094
- with hemorrhage, 1093
- with pseudocysts, 1092
- for chronic pancreatitis, 1097-1100
- results of, 1099-1100
- for neoplasms, 1100-1108
- cystic, 1105
- ductal adenocarcinoma, 1101-1105
- islet cell tumors, 1105, 1108
- for nonneoplastic changes, 1108-1109
- historical aspects of, 1085-1089
- ultrasonography of, for endocrine disease, 1077-1081
- endoscopic, 1077-1078
- to localize tumors, 1077-1079, 1081
- transplantation for diabetes mellitus, 1077, 1108-1109, 1111
- historical aspects of, 1086
- Pancreatic insufficiency, in cystic fibrosis, in children, 617-618
- Pancreatic transplantation, abdominal complications of, 1353-1356
- Pancreatitis, CT and MR imaging of. *See Pancreas.*
- plain films of, 1337
- Panographic radiography, of maxillofacial deformities, 221-223
- Papillomas, of paranasal sinuses and nasal cavity, 66-67
- Papillomatosis, laryngotracheal, in children, 609, 661
- Paranasal sinuses, imaging of, for epithelial tumors. *See Epithelial tumors.*
- for nonepithelial tumors. *See Nonepithelial tumors.*
- Parasitic infections, and gastritis, 1329
- Parathyroid glands, MR imaging of, for hyperparathyroidism. *See Hyperparathyroidism.*
- radionuclide imaging of, 913-915
- anatomy and embryology in, 992
- for hyperparathyroidism, 1009, 1012-1014
- physiology in, 993
- radioisotopes in, 993-994
- scintigraphy in, 996-997
- ultrasonography of, 979-987
- appearance of lesions on, 980, 983, 985-986
- for hyperparathyroidism, 980, 983, 985
- technique for, 979-980
- to guide fine-needle aspiration, 987
- to localize disease, intraoperative, 987
- preoperative, 979, 986-987
- Parotid glands, features of AIDS in, 45-46
- Patent ductus arteriosus, in children, interventional radiology in, 707-708
- telltale signs of, 578-579
- in newborns, as complication of nursery treatment, 671
- Pediatric chest, imaging of, bronchi. *See Bronchi.*
- for congenital heart disease. *See Congenital heart disease.*
- for cystic fibrosis. *See Cystic fibrosis.*
- for cysts. *See Cysts.*
- for HIV involvement. *See HIV infection.*
- for mediastinal masses. *See Mediastinal masses.*
- for nodules and masses. *See Pulmonary nodules and masses.*
- for postoperative complications, 687-691
- esophageal dysfunction, 687-689
- for pseudomasses, 651-652
- high-resolution CT in, for pulmonary parenchymal disorders. *See Pulmonary parenchymal disorders.*
- in solid organ transplantation. *See Solid organ transplantation.*
- interventional radiology in. *See Interventional radiology.*
- MR imaging in, for congenital cardiovascular disease. *See Congenital cardiovascular disease.*
- nuclear scintigraphy in. *See Nuclear scintigraphy.*
- preoperative, 677-687
- for acquired pulmonary lesions, 686
- for chest wall and diaphragm, 680-682
- for localized bronchiectasis, 686-687
- for mediastinal masses and cysts, 682-683
- for pulmonary parenchyma, 683, 685

Pediatric chest (*Continued*)

- for tracheobronchial tree, 677, 679-680
- smaller airways, 613-615
- trachea. *See* *Trachea*.
- ultrasonography in. *See* *Ultrasonography*.
- in newborns. *See* *Newborn chest*.
- Pelvic floor, spastic, defecography of, 1388-1389
- Pentobarbital sodium, for interventional radiology, in children, 694
- Perforations, of gastrointestinal tract. *See* *Gastrointestinal tract*.
- Perfusion scintigraphy, of chest, in children, 481-482
- Periampullary masses, surgical procedures for, postoperative imaging of, 1245
- Periapical abscesses, and dental implantology, 175, 179
- Periapical cemental dysplasia, of craniofacial bones, 127
- Periapical cysts, of jaws, 102-103
- Pericardial cysts, in children, 595
- Pericardial defect, in congenital heart disease, 579
- Pericardial fistulas, nuclear medicine studies of, 931
- Pericytic bone tumors, imaging of, 352-354
- Periodontitis, and dental implantology, 175
- Periosteal desmoids, of femur, 279-280
- Periosteal osteosarcomas, imaging of, 272
- Petrosal sinus sampling, of Cushing's syndrome, 1053
- Pharyngoesophagography, 1265-1291
 - clinical perspective on, 1265-1266
 - normal morphologic appearances in, 1273-1274
 - of achalasia, 1287
 - of Barrett esophagus, 1278-1279
 - of carcinoma of gastric cardia, 1289
 - of cricopharyngeal dysfunction, 1274
 - of diffuse esophageal spasms, 1286-1287
 - of drug-induced esophagitis, 1280
 - of esophageal intramural pseudodiverticulosis, 1282, 1284
 - of esophageal motility disorders, 1285-1286, 1288-1289
 - of esophageal strictures, 1282
 - of esophageal ulcers, 1280-1281
 - of esophageal varices, 1284
 - of esophageal webs, 1281-1282
 - of gastroesophageal reflux disease, 1275, 1277-1278
 - of infectious esophagitis, 1279
 - of laryngeal penetration and aspiration, 1274
 - of normal esophageal motility, 1272-1273
 - of normal swallow, 1268-1272
 - of nutcracker esophagus, 1287
 - of pharyngeal diverticula and pouches, 1274-1275
 - of pharyngeal tumors, 1275
 - of presbyesophagus, 1287-1288
 - principles of, 1265
 - technique for, 1266-1268
- Pharynx, contrast imaging of. *See* *Pharyngoesophagography*.
- features of AIDS in, 49, 56
- perforations of, 1219-1222
- postoperative imaging of, 1238
- Pheochromocytomas, ultrasonography of, 1073
- Pick's disease, dementia in, PET of, 939
- Pigmented villonodular synovitis, of soft tissue, MR imaging of, 364
- Pindborg tumors, of jaws, 113, 117
- Pituitary gland, MR imaging of. *See* *Hypothalamic-pituitary axis*.
- Plain films, of abdomen. *See* *Abdomen*.
- of bones, for adamantinomas, 355
- for aneurysmal cysts, 342-343
- for angiosarcomas, 351-352
- for cartilaginous tumors. *See* *Cartilaginous bone tumors*.
- for cystic angiomas, 350-351
- for Ewing's sarcoma, 328-330
- for fibrous lesions. *See* *Fibrous bone lesions*.
- for glomus tumors, 352-353
- for hemangiomas, 348-349
- for hemangiopericytomas, 353-354
- for Langerhans' cell histiocytosis, 345
- for osseous lesions. *See* *Osseous lesions*.
- for simple cysts, 340
- of chest, in children, perplexing, 528-529
- of chronic mesenteric ischemia, 1210-1211
- of esophagus, for recurrent carcinoma, 1255-1256
- of gastrointestinal tract, for perforations. *See* *Gastrointestinal tract*.
- in children, 1395-1396
- of ischemic bowel disease, 1204-1207
- of osteoporosis, 1134
- of pulmonary embolism, 850-851
- of stress fractures, 753
- Plantar fasciitis, bone scintigraphy of, 764, 766
- Plasma cell granulomas, in children, 661
- Plasmacytomas, of paranasal sinuses and nasal cavity, 84
- Pleural fluid, in children, postoperative, 687
 - ultrasonography of, 518-520
 - perinatal and postnatal, 501-503
- Plummer's disease, radionuclide imaging of, 998
- Pneumatocoles, in children, inflammatory, 640, 643
 - traumatic, 643-644
- Pneumarthrography, of temporomandibular joint, with CT, 151-152
- Pneumocystis carinii* infections, of temporal bone, 56
- Pneumocystis carinii* pneumonia, in children, high-resolution CT of, 539
 - pulmonary cysts in, 648
 - solid organ transplantation and, 471-472
 - with HIV infection, 454-455, 460
 - radionuclide imaging of, 786-787
- Pneumonia, in children, high-resolution CT of, bacterial, 538-539
 - hypersensitivity, 543
 - mycoplasma, 539-540
 - organizing, bronchiolitis obliterans with, 615
 - high-resolution CT of, 550
 - solid organ transplantation and, 469-470
- in newborns, 668, 670
- Pneumonitis, lymphocytic interstitial, in children, with AIDS, 657
 - with HIV infection. *See* *HIV infection*.
- Pneumothorax, cystic fibrosis and, in children, 626-627
- in newborns, as complication of nursery treatment, 670
 - postoperative, in children, 687
- Polycystic ovarian syndrome, CT and MR imaging of, 1121-1122
- Polycythemia vera, bone marrow involvement in, MR imaging of, 393, 395
- Polyostotic fibrous dysplasia, imaging of, 286-287
- Polyps, sinonasal, 42-44
- Polysplenia, telltale signs of, in children, 580-581
- Polyvinyl alcohol, in embolization, in children, 701
- Positron emission tomography, 935-959
 - clinical uses of, 954-955
 - historical aspects of, 935-938
 - in cardiology, 951-954
 - in oncology, 947-948
 - new approaches to, 954
 - of aging brain, 938-939
 - of breast carcinoma, 949-950

- of cerebral neoplasms, 942
- of cerebrovascular disease, 945, 947
- of colon carcinoma, 950
- of dementia, 939
- of epilepsy, 939, 942
- of extremity tumors, 950
- of head and neck tumors, 950
- of lung carcinoma, 948-949
- of psychiatric disorders, 942-943, 945
- of thyroid, 912
- of tumors, 870-871
- quantification in, 954
- Postpartum thyroiditis, radionuclide imaging of, 1001
- Posttransplant lymphoproliferative disorder, in children, 473, 475
- Presbyesophagus, pharyngoesophagography of, 1287-1288
- Primary skeletal neoplasms, MR imaging of, 411-424
 - benign tumors, 416-419
 - for posttherapy evaluation, 421-423
 - for staging, 415-416
 - malignant tumors, 419-421
 - technique for, 411-415
- Proctocolectomy, postoperative imaging of, 1251
- Prognathism, mandibular, pre- and postoperative imaging of, 226-227
- Progressive systemic sclerosis, in ischemic bowel disease, 1211-1212
- Prostate carcinoma, metastatic bone disease in, bone scintigraphy of, 734-735
- Prostate-specific antigen, in prostate carcinoma, 734-735
- Proteus syndrome, in children, pulmonary cysts in, 646
- Protozoan infections, solid organ transplantation and, in children, 471-472
- Pseudoaneurysms, of soft tissue, MR imaging of, 365
- Pseudocysts, with acute pancreatitis, CT and MR imaging of, 1092
 - with chronic pancreatitis, CT and MR imaging of, 1099
- Pseudodiverticula, pharyngeal, pharyngoesophagography of, 1275
- Pseudodiverticulosis, esophageal intramural, pharyngoesophagography of, 1282, 1284
- Pseudohermaphroditism, CT and MR imaging of, 1118-1119
- Pseudomasses, pulmonary, in children, 651-652
- Psoriatic arthritis, of temporomandibular joint, 139-140
- Psychiatric disorders, PET of, 942-943, 945
- Pulmonary abscesses, in children, 644
 - drainage of, interventional radiology in, 697-699
 - ultrasonography of, 521
- Pulmonary agenesis, in children, 610
- Pulmonary arteries, MR imaging of, in children, 562, 564, 566
- Pulmonary artery segment, flat or concave, in congenital heart disease, 574-575
- Pulmonary artery stenosis, in children, interventional radiology in, 706-707
- Pulmonary blastomas, in children, 640, 662-663
- Pulmonary cysts, in children, with systemic disease, 644, 646, 648
- Pulmonary edema, in children, high-resolution CT of, 540
 - solid organ transplantation and, 467
- Pulmonary embolism, diagnosis of, 849-855
 - arterial blood gases in, 851
 - electrocardiography in, 851
 - plain films in, 850-851
 - signs and symptoms in, 850
 - ventilation/perfusion scanning in, 851-855
- Pulmonary function tests, in cystic fibrosis, in children, 618
- Pulmonary hemorrhage, high-resolution CT of, in children, 540
- Pulmonary hyperinflation, bilateral, in congenital heart disease, 581
- Pulmonary hypoplasia, ultrasonography of, perinatal and postnatal, 503-505
- Pulmonary infections, in children, nuclear scintigraphy of, 486-487
 - with cystic fibrosis, 618-619
 - treatment of, 625
 - radionuclide imaging of, 788
- Pulmonary infiltrates, ultrasonography of, in children, 520-522
- Pulmonary interstitial emphysema, in children, 640
 - in newborns, as complication of nursery treatment, 670
- Pulmonary nodules and masses, in children, 652-663
 - congenital lesions, 657-658, 660
 - iatrogenic nodules, 663
 - infections, 652, 657
 - neoplasms, 661-663
 - trauma, 660-661
 - vascular malformations, 660
 - vasculitis, 661
- Pulmonary parenchymal cysts, in children, 638
- Pulmonary parenchymal disorders, high-resolution CT of, in children, 533-551
 - air-space disease, 536
 - airway disease, 537-538
 - asthma, 547
 - bacterial pneumonia, 538-539
 - bronchiectasis, 543
 - bronchiolitis obliterans, 547, 550
 - bronchopulmonary dysplasia, 543
 - cystic fibrosis, 547
 - histiocytosis X, 543
 - hypersensitivity pneumonia, 543
 - infections in immunocompromised patients, 539
 - interstitial disease, 537
 - lymphangitic metastatic disease, 543
 - mycoplasma pneumonia, 539-540
 - normal anatomy in, 535-536
 - obliterative bronchiolitis, 550
 - plain films and history in, 538
 - pulmonary edema, 540
 - pulmonary hemorrhage, 540
 - secondary pulmonary lobule, 536
 - technique for, 533-535
 - tuberculosis, 540
 - vascular disorders, 538
 - vasculitis, 543
 - viral infections, 539
- preoperative imaging of, in children, 683, 685
- Pulmonary scintigraphy, in children. *See Nuclear scintigraphy.*
- Pulmonary sequestration, in children, 634-635, 658
 - ultrasonography of, 522, 524
 - perinatal and postnatal, 506-507
- Pulmonary stenosis, in children, interventional radiology in, 702-703
- Pulmonary therapy, for cystic fibrosis, in children, 624-626
- Pulmonary tumors, nuclear scintigraphy of, in children, 486
- Pulmonary vascularity, in congenital heart disease, 575-578
- Pulmonary veins, anomalous, in congenital heart disease, 579

- Quantitative computed tomography, of osteoporosis, 1137-1139
- Quantitative ultrasonography, of osteoporosis, 1139-1140
- Quinolones, for cystic fibrosis, in children, 626
- Radiation-induced thyroid disease, imaging of, 1002, 1004-1005
- Radiation strictures, esophageal, pharyngoesophagography of, 1282
- Radiation therapy, and secondary osteosarcomas, 275-276
for giant cell bone tumors, 318-319
- Radiation vasculitis, in ischemic bowel disease, 1212-1214
- Radicular cysts, of jaws, 102-103
- Radiology, interventional. See *Interventional radiology*.
- Radionuclide imaging. See also specific procedures, e.g., *Bone scintigraphy*.
of endocrine hypertension. See *Endocrine hypertension*.
of endocrine system. See *Endocrine system*.
of hyperparathyroidism, vs. other imaging techniques, 1026-1027
of infections and inflammatory diseases. See *Infections*.
of parathyroid glands. See *Parathyroid glands*.
of thyroid gland. See *Thyroid gland*.
of ventricular function. See *Ventricular function*.
- Rathke's cleft cysts, MR imaging of, 1166
- Rectal prolapse, defecography of, 1390-1391
- Rectoceles, defecography of, 1387
- Rectum, metastatic disease in, 1371-1372
perforations of, 1229-1233
- Red blood cells, in radionuclide imaging, of ventricular function, 819-820
- Reflex sympathetic dystrophy, posttraumatic, bone scintigraphy of, 776-777
- Rejection, of solid organ transplants, in children, 472-473
- Renal cell carcinoma, metastatic bone disease in, bone scintigraphy of, 736
- Renal colic, plain films of, 1338
- Renal transplantation, abdominal complications of, 1345-1347
- Renovascular hypertension, ACE inhibition scintigraphy of, 831-848
choice of protocols for, 836-838
diagnostic pitfalls of, 845-846
dosages, acquisition, graphs, and quantitations in, 839, 841
in newborns and children, 844-845
interpretation of, 841-844
patient preparation for, 838-839
radiopharmaceuticals in, 833
severity of disease and, 844
clinical features of, 831-832
diagnosis of, 832-833
pathophysiology of, 833-836
- Reproductive system, complications of, in cystic fibrosis, in children, 622
- Residual cysts, of jaws, 104
- Respiratory distress syndrome, in newborns, 667-668
- Respiratory tract, complications of, in cystic fibrosis, in children, 618-619
- Retention cysts, sinonasal, 42-44
- Retinoblastomas, and secondary osteosarcomas, 276
- Rhabdomyosarcoma, of paranasal sinuses and nasal cavity, 82-83
- Rhenium (Sn)-HEDP, in nuclear medicine therapy, for intractable bone pain, 874
- Rheumatoid arthritis, of temporomandibular joint, 139
- Rhomberg's syndrome, pre- and postoperative imaging of, 228
- Rib notching, in congenital heart disease, 581
- Riedel's thyroiditis, radionuclide imaging of, 1002
- Right aortic arch, in congenital heart disease, 573-574
- Rotor's disease, nuclear medicine studies of, 929
- Roux-en-Y anastomosis, postoperative imaging of, 1243
- Rubidium, in PET, of coronary artery disease, 952
- Sacrum, giant cell tumors of, 310-311
- Salivagram, of foreign body aspiration, in children, 483, 486
- Samarium-EDTMP, in nuclear medicine therapy, for intractable bone pain, 874
- Sarcoidosis, and gastrointestinal tract inflammation, 1330 in children, 657
MR imaging of, 1177-1178
- Sarcomas, bone and soft tissue, nuclear medicine studies of, 867
Ewing's, bone scintigraphy of, 733
osteogenic, bone scintigraphy of, 733
- Schatzki rings, pharyngoesophagography of, 1277-1278
- Schwannomas, of paranasal sinuses and nasal cavity, 81
- Scimitar syndrome, in children, 610, 612
- Scintigraphy, adrenal, technique for, 915-918
bone. See *Bone scintigraphy*.
of endocrine hypertension, adrenal cortical, 1030-1032
adrenal medullary, 1032, 1034-1037
of parathyroid glands, 996-997
of soft tissue, for tumors, 369
of thyroid gland, 995-996
- Scleroderma, and esophageal dysmotility, pharyngoesophagography of, 1288
in ischemic bowel disease, 1211-1212
- Scoliosis, correction of, and bronchus impingement, in children, 613
- Scrotum, ultrasonography of, for endocrine disease, 1081-1082
- Secondary osteosarcomas, imaging of, 275-276
- Secondary pulmonary lobule, high-resolution CT of, in children, 536
- Selenomethionine, in radionuclide imaging, of parathyroid glands, 913
- Septic emboli, in children, 652
- Septo-optic dysplasia, MR imaging of, 1175
nuclear medicine studies of, 929
- Serous inclusion cysts, ovarian, CT and MR imaging of, 1120
- Shin splints, bone scintigraphy of, 763
- Shunts, intracardiac, radionuclide imaging of, 822-823
- Sickle cell anemia, bone marrow involvement in, MR imaging of, 402-405
- Sigmoid colectomy, postoperative imaging of, 1249-1250
- Sigmoidoscopy, of colorectal cancer, 1191, 1294
- Silent thyroiditis, radionuclide imaging of, 1001
- Simple bone cysts, imaging of, 339-341
vs. enchondromas, 243
- Single photon emission computed tomography, of bones, 726-727
of chest, in children, 494
of coronary artery disease, for rest function assessment, 805-806
vs. planar imaging, 800-801
of hepatic hemangiomas, 868
of metastatic bone disease, 864
of neurologic disease. See *Neurologic disease*.
of skeletal trauma, 743

- of tumors, 865
- of ventricular function, 825, 826, 827
- Single-photon absorptiometry, of osteoporosis, 1134-1135
- Sinonasal cavity, features of AIDS in, 46-49
- Sinonasal diseases, chronic inflammatory. *See Chronic inflammatory sinonasal diseases.*
- Sinus lateralis, preoperative imaging of, for endoscopic sinus surgery, 6-7, 9
- Sinuses, endoscopic surgery of. *See Endoscopic sinus surgery.*
- Sinusitis, chronic, 37-40
- Situs, abnormal, in congenital heart disease, 579-581
- Skeletal abnormalities, in congenital heart disease, 581-582
 - in cystic fibrosis, in children, 622
- Skeletal neoplasms, primary. *See Primary skeletal neoplasms.*
- Skeletal scintigraphy, in children, 493-495
- Skeletal trauma, bone scintigraphy of, **739-781**
 - biomechanical stress lesions, 766-771
 - facet syndrome, 766-767
 - os trigonum syndrome, 767
 - osteoarthritis, 771
 - talar coalitions, 767, 771
 - tibiotalar impingement syndrome, 767
 - bone bruises, 757, 763
 - bursitis, 771, 776
 - epiphyseal injuries, 766
 - fractures, 743, 747, 753
 - avulsion, 757
 - healing of, 777
 - insufficiency, 753, 757
 - occult, 743, 747
 - stress, 747, 753
 - osteonecrosis, 771
 - posttraumatic sequelae, 776-777
 - shin splints, 763
 - SPECT in, 743
 - technique for, 739, 743
 - tendinitis, 763-764, 766
- Small bowel, metastatic disease in, 1369-1370
 - perforations of, 1227-1229
 - postoperative imaging of, 1245-1246
- Small cell osteosarcomas, imaging of, 271
- Smooth muscle tumors, in children, with HIV infection, 461-462
- Soft tissue tumors, **359-372**
 - arteriography of, 368
 - CT of, 368
 - evaluation of, algorithm for, 370
 - initial evaluation of, 359-360
 - local recurrence of, follow-up of, 369-370
 - MR imaging of, 360-368
 - for benign vs. malignant tumors, 367-368
 - for specific diagnoses, 361-365, 367
 - gadolinium-enhanced, 368
 - scintigraphy of, 369
 - ultrasonography of, 368-369
- Solid organ transplantation, abdominal complications of, **1345-1357**
 - bone marrow transplantation, 1348-1350
 - heart transplantation, 1350-1353
 - kidney transplantation, 1345-1347
 - liver transplantation, 1347-1348
 - pancreatic transplantation, 1353-1356
- in children, chest involvement in, **465-479**
 - postoperative evaluation for, 467, 469-477
 - early findings in, 467, 469
 - for bacterial infections, 469-470
 - for bronchiolitis obliterans, 473
 - for fungal infections, 471
 - for neoplasms, 473, 475, 477
 - for protozoan infections, 471-472
 - for rejection, 472-473
 - for viral infections, 470-471
 - preoperative evaluation for, 465-467
- Spasms, diffuse esophageal, pharyngoesophagography of, 1286-1287
- Spastic pelvic floor, defecography of, 1388-1389
- Sphincter of Oddi dysfunction, nuclear medicine studies of, 928
- Spin echo imaging, of diffuse bone marrow disease, 390-391
- Spindle cell tumors, solid organ transplantation and, in children, 475, 477
- Spine, giant cell tumors of, 310-311
- Spleen, nuclear scintigraphy of, in children, 496
- Squamous cell carcinoma, of paranasal sinuses and nasal cavity, 67-70
- Stafne cysts, of jaws, 110-111
- Stem cell dysplasia, in diffuse bone marrow disease, MR imaging of, 402-405
- Stem cell failure, in diffuse bone marrow disease, MR imaging of, 395-397
- Stem cell proliferation, in diffuse bone marrow disease, MR imaging of, 393
- Stomach, imaging of, for inflammatory diseases. *See Gastrointestinal tract.*
- metastatic disease in, 1368-1369
- postoperative imaging of, 1241-1245
- Stomach introposition, postoperative imaging of, 1241
- Stroke etiologies, SPECT of, 890, 893-894
- Stromal hyperthecosis, CT and MR imaging of, 1122-1123
- Stromal tumors, ovarian, CT and MR imaging of, 1126-1127
- Strongyloides stercoralis* infections, and gastritis, 1329
- Subarachnoid hemorrhage, SPECT of, 893-894
- Subglottic hemangiomas, in children, 609
- Subluxation, of temporomandibular joint, 141
- Surface osteosarcomas, imaging of, 271-276
- Surfactant therapy, for respiratory distress syndrome, in newborns, 668
- Sweat glands, in cystic fibrosis, in children, 618
- Sympathetic maintained pain syndrome, posttraumatic, bone scintigraphy of, 777
- Synovial chondromatosis, of temporomandibular joint, 160-162
- Syphilis, and gastritis, 1328
- Systemic collateral arteries, in congenital heart disease, 578-579
- Talar coalitions, bone scintigraphy of, 767, 771
- Technetium, in bone scintigraphy, 721-722
 - in myocardial perfusion imaging. *See Myocardial perfusion imaging.*
 - in nuclear medicine studies, of hepatobiliary system. *See Hepatobiliary system.*
 - of tumors, 867
 - in nuclear scintigraphy, in children. *See Nuclear scintigraphy.*
 - in radionuclide imaging. *See Radionuclide imaging.*
 - of parathyroid glands, 993, 994
 - of thyroid gland, 993, 994
 - in SPECT, of neurologic disease, 883-885
- Teeth, fractures of, preoperative imaging of, 210, 212
- Telangiectatic osteosarcomas, imaging of, 269, 271

- Temporal bone, features of AIDS in, 56, 60
 three-dimensional CT of, 189
- Temporomandibular joint, imaging techniques for, 149-154
 arthrography, 151-152, 154
 CT, 150-151
 CT with pneumoarthrography, 151-152
 MR imaging, 152, 154
 multidirectional tomography, 149-150
 panographic radiography, 222
 three-dimensional CT, 184, 189
- internal derangement of, 154-159
 pathology of, 135-147
 ankylosis, 143-144
 arthritis, 137, 139-141
 congenital and developmental, 135-137
 condylar agenesis, 135-136
 condylar hyperplasia, 137
 condylar hypoplasia, 136-137
 dislocation, 141, 143
 fractures, 143
 neoplasms, 144
 subluxation, 141
 synovial chondromatosis of, 160-162
- Tendinitis, bone scintigraphy of, 763-764, 766
- Teratomas, of hypothalamic-pituitary axis, MR imaging of, 1169, 1171
 ovarian, CT and MR imaging of, 1125-1126
 ultrasonography of, in children, 527
- Testicular torsion, nuclear medicine studies of, 469-470
- Testosterone-producing tumors, ovarian, CT and MR imaging of, 1123
- Tetralogy of Fallot, telltale signs of, in children, 574-575
- Thallium, in myocardial perfusion imaging, vs. technetium, 796
 in nuclear medicine studies, of tumors, 864-866
 in nuclear scintigraphy, in children, 488
 in PET, of coronary artery disease, 952, 953
 of myocardial viability, 953
 in radionuclide imaging, of parathyroid glands, 913-914, 915, 993
 of thyroid carcinoma and metastatic thyroid disease, 913
 of thyroid gland, 993
- Theca lutein cysts, CT and MR imaging of, 1120
- Three-dimensional computed tomography, of head and neck, 181-194
 for congenital and developmental abnormalities, 181-183
 for traumatic injuries, 183
 for tumors, 183-184
 of maxillofacial deformities, 226
 of musculoskeletal tumors. See *Musculoskeletal tumors*.
 of temporal bone, 189
 of temporomandibular joint, 184, 189
- Thymomas, in children, 591
- Thymus, imaging of, in children, 584, 586, 588, 591
 ectopic, 586, 588
 for lesions, 588, 591
 normal, 584, 586
 nuclear scintigraphy in, 495
 ultrasonography in, 524
- Thyroglossal duct cysts, ultrasonography of, 970-971
- Thyroid carcinoma, nuclear medicine therapy for, 874-875
 radionuclide imaging of, 912-913
- Thyroid gland, nuclear scintigraphy of, in children, 495
 radionuclide imaging of, 911-912
 anatomy and embryology in, 991-992
 and radiation-induced disease, 1004-1005
 for hyperthyroidism, 997-998
 for hypothyroidism, 998, 1000
 for malignancies, 1005-1009
 for multinodular goiter, 1003-1004
 for nodules, 1002-1003
 for thyroiditis, 1000-1002
 physiology in, 992-993
 radioisotopes in, 993-994
 scintigraphy in, 995-996
 thyroid radioactive iodine uptake test in, 994-995
 ultrasonography of, 967-979
 for cystic lesions, 970-971
 for developmental disease, 970
 for hyperplasia, 977
 for hyperthyroidism, 976
 for hypothyroidism, 977
 for malignancies, 971, 975
 for thyroiditis, 975-976
 technique for, 967, 970
 to guide ethanol injection, 977, 979
 to guide fine-needle aspiration, 979
- Thyroid radioactive iodine uptake test, in radionuclide imaging, of thyroid gland, 994-995
- Thyroiditis, radionuclide imaging of, 998, 1000-1002
 ultrasonography of, 975-976
- Tibiotalar impingement syndrome, bone scintigraphy of, 767
- Tomography, in dental radiology, 100
 multidirectional, of temporomandibular joint, 149-150
 of maxillofacial deformities, 225-226
- Toxoplasma gondii* infections, solid organ transplantation and, in children, 472
- Trachea, and larynx, abnormalities of, in children, 606-610
 congenital, 606-608
 extrinsic, 610
 intraluminal, 608-609
 mural, 609-610
- Tracheal agenesis, in children, 607-608
- Tracheal anastomosis, dehiscence of, solid organ transplantation and, in children, 467, 469
- Tracheal stenosis, in children, 609
- Tracheobronchial tree, preoperative imaging of, in children, 677, 679-680
- Tracheoesophageal fistulas, in children, 606-607
- Tracheomalacia, in children, 609
- Transient ischemic attacks, SPECT imaging of, 894-895
- Transplantation, solid organ. See *Solid organ transplantation*.
- Transposition of great arteries, in children, arterial switch for, 568
 telltale signs of, 575
- Transsphenoidal encephaloceles, MR imaging of, 1173-1175
- Trauma, maxillofacial. See *Maxillofacial trauma*.
 skeletal. See *Skeletal trauma*.
 to chest, in children, 660-661
 to gastrointestinal tract, due to child abuse, 1405-1407
 to head, SPECT of, 901, 904
- Traumatic arthritis, of temporomandibular joint, 140-141
- Traumatic injuries, to head and neck, three-dimensional CT of, 183
- Traumatic pneumatoceles, in children, 643-644
- Treacher Collins syndrome, pre- and postoperative imaging of, 227
- Tricuspid atresia, telltale signs of, in children, 577-578
- Tricuspid stenosis, in children, interventional radiology in, 705
- Trisomy 21, congenital heart disease in, 581

- Tuber cinereum, hamartomas of, MR imaging of, 1167, 1169
- Tuberculosis, and gastritis, 1328
- in children, high-resolution CT of, 540
- with HIV infection, 460
- Tubular agents, in ACE inhibition scintigraphy, of renovascular hypertension, 837-838, 839, 841-843
- Tumors, benign odontogenic. See *Benign odontogenic tumors*.
- bone. See *Bone tumors*.
- detection of, 860
- epithelial. See *Epithelial tumors*.
- fever with, radionuclide imaging of, 787-788
- hypothalamic-pituitary, MR imaging of. See *Hypothalamic-pituitary axis*.
- in children, chest wall, preoperative imaging of, 681-682
- ganglion cell, 600, 603
- mediastinal germ cell, 591, 593
- pulmonary, nuclear scintigraphy of, 486
- spindle cell, solid organ transplantation and, 475, 477
- with HIV infection, smooth muscle, 461-462
- islet cell, CT and MR imaging of, 1105, 1108
- algorithm for, 1111
- molecular biology of, advances in, 861
- musculoskeletal, histologic features of, 373-381
- nonepithelial. See *Nonepithelial tumors*.
- nuclear medicine studies of, 859-879
- bone scintigraphy. See *Bone tumors*.
- cerebrospinal fluid flow studies, 868-870
- hepatic artery pump studies, 870
- hepatic hemangiomas, 868
- monoclonal antibodies in, 872-874
- PET, 870-871
- receptor imaging in, 870
- tumor targeting tracers in, 864-868
- gallium citrate, 866-867
- meta-iodobenzylguanidine, 868
- technetium sestamibi, 867
- thallium chloride, 864-866
- nuclear medicine therapy for, 874-875
- of head and neck, three-dimensional CT of, 183-184
- of soft tissue. See *Soft tissue tumors*.
- ovarian, CT and MR imaging of. See *Ovaries*.
- pharyngeal, pharyngoesophagography of, 1275
- scrotal, ultrasonography of, 1081-1082
- staging of, 860-861
- treatment response of, evaluation of, 860-861
- virilizing, angiography of, vs. venous sampling, 1065
- Turner syndrome, MR imaging of, in children, 559
- Two-dimensional computed tomography, of musculoskeletal tumors. See *Musculoskeletal tumors*.
- Tympanic plate, fractures of, preoperative imaging of, 210
- Ulcerative colitis, postoperative imaging of, 1250-1251
- Ulcers, duodenal, 1319, 1321-1326
- esophageal, pharyngoesophagography of, 1280-1281
- gastric, 1317-1318
- peptic and duodenal, postoperative imaging of, 1242-1243
- Ultrasonography, of adrenal gland. See *Adrenal gland*.
- of chest, in children, 517-531
- for juxtadiaphragmatic lesions, 522-524
- for mediastinal lesions, 524-529
- for opaque chest, 524
- for perplexing plain films, 528-529
- for pleural abnormalities, 518-520
- for pulmonary infiltrates and peripheral lesions, 520-522
- historical aspects of, 517-518
- technique for, 518
- perinatal and postnatal, 499-516
- fetal echocardiography. See *Fetal echocardiography*.
- for bronchogenic cysts, 507
- for bronchopulmonary foregut malformation, 506
- for congenital diaphragmatic hernia, 505-506
- for cystic adenomatoid malformation of lung, 507, 509
- for pleural fluid, 501-503
- for pulmonary hypoplasia, 503-505
- for sequestration, 506-507
- normal prenatal examination in, 499-501
- of colon, for recurrent carcinoma, 1263
- of gastrointestinal tract, for perforations, 1226
- of hyperparathyroidism, vs. other imaging techniques, 1026-1027
- of pancreas. See *Pancreas*.
- of parathyroid glands. See *Parathyroid glands*.
- of scrotum, for endocrine disease, 1081-1082
- of soft tissue, for tumors, 368-369
- of thyroid gland. See *Thyroid gland*.
- quantitative, of osteoporosis, 1139-1140
- Uncinate process, preoperative imaging of, for endoscopic sinus surgery, 5-6, 13
- Upper gastrointestinal tract series, of abdomen, declining use of, 1336
- of esophagus, for recurrent carcinoma, 1256
- Urinomas, pancreatic transplantation and, 1355-1356
- Vagotomy, postoperative imaging of, 1242
- Valvular heart disease, ventricular function in, radionuclide imaging of, 824-825
- Valvuloplasty, in children, interventional radiology in, 702-703
- Varicella, in children, solid organ transplantation and, 470-471
- with HIV infection, 460-461
- Varices, esophageal, pharyngoesophagography of, 1284
- Vascular complications, of pancreatic transplantation, 1356
- Vascular compression, of airway, in children, MR imaging of, 561-562
- preoperative imaging of, 679-680
- Vascular disorders, in children, high-resolution CT of, 538
- vs. pulmonary lesions, 660
- Vascular graft infections, radionuclide imaging of, 788-789
- Vascular rings, MR imaging of, in children, 561-562
- Vascular scintigraphy, in children, 492-493
- Vascular stents, in children, interventional radiology in, 705-706
- Vascular tumors, of bones, 348
- Vasculitis, in children, 661
- high-resolution CT of, 543
- in ischemic bowel disease, 1211-1214
- Venous flow, nuclear scintigraphy of, in children, 491-492
- Venous sampling, of endocrine system, vs. angiography. See *Angiography*.
- Ventilation, high-frequency, for pulmonary disease, in newborns, 675-676
- Ventilation/perfusion scanning, of pulmonary embolism. See *Pulmonary embolism*.

- Ventilation scintigraphy, of chest, in children, 482-483
- Ventricular function, nuclear scintigraphy of, in children, 489-491
 - radionuclide imaging of, 817-830
 - equilibrium radionuclide angiography in, 819-820
 - first-pass technique in, 817-819
 - in ischemic heart disease, 823-824
 - in valvular heart disease, 824-825
 - measurements from, 820-823
 - diastolic function, 822
 - ejection fraction, 820-821
 - intracardiac shunts, 822-823
 - left ventricular volumes, 822
 - regional wall motion, 821-822
 - with simultaneous myocardial perfusion, 804-806, 825-829
- Ventricular obstructions, MR imaging of, in children, 562, 564, 566
- Ventricular septal defect, telltale signs of, in children, 576-577
- Vertical banded gastroplasty, postoperative imaging of, 1244
- Viral infections, and gastritis, 1329
 - in children, 657
 - high-resolution CT of, 539
 - solid organ transplantation and, 470-471
- Virilizing tumors, angiography of, vs. venous sampling, 1065
- Water suppression techniques, in MR imaging, of diffuse bone marrow disease, 391-392
- Webs, esophageal, pharyngoesophagography of, 1281-1282
- Xenon, in nuclear scintigraphy, in children, 482
 - in SPECT, of neurologic disease, 882
- X-ray fluorescent scanning, of thyroid, 912
- Zenker diverticula, pharyngoesophagography of, 1274-1275
 - postoperative imaging of, 1239
- Zollinger-Ellison syndrome, imaging of, 1324, 1326
- Zygoma, fractures of, preoperative imaging of, 217

8300-68
24
H

g.

use